Extra Edition—Annual Market Reviews and Statistical Records—Extra Edition

Oil, Paint and Drug Reporter

The Market Authority Since 1871
Chemicals-Dyestuffs-Drugs-Paints-Oils-Fertilizers

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Oil, Paint and Drug Reporter

The Market Authority Since 1871
Chemicals-Dyestuffs-Drugs-Paints-Oils-Fertilizers

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Oil, Paint and Drug Reporter

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Business Faces the Necessity of Working Hard in 1930

At the beginning of 1929, the problem which confronted him who would peer into the business future was one of calculating or estimating the duration of the prosperity which continued then to increase despite the lack of a broad foundation. The basis of the prosperity was sound; but it was somewhat constricted. Money was plentiful; but it was not evenly distributed among all industries; so that many were not firmly fixed on their narrow support. Prosperity had high peaks, very high peaks; but it also had a number of valleys—and some of these were well down toward sea level. Although, these valleys were not deepened at any time during the year, the peaks were built higher and still higher until their slopes (because of the narrowness of their bases) finally became too steep. Their angle of repose was lost, and the natural consequences were slides.

This year opened with a new problem before the business seer. The sliding of the peaks had done considerable damage, not only to the industries and other and unproductive undertakings which had been set up on the heights or on the slopes, but in the piling up in the valleys of the debris of the slides. The big question of 1930 was, and is, the calculating of the time it will require to get to a satisfactory rate of rebuilding on the new levels. Some wreckage must be gathered together. Fortunately the more essential structures of industry and commerce were merely displaced and not demolished by the slides. Some digging out has been made necessary to get rid of the debris that slid down upon the industries which, a year ago, were becoming a bit gloomy in the shadows of the ever-mounting peaks about them.

The answer to the present problem in business forecasting is less difficult to find than was that to the puzzle of 1929. The factors involved are more tangible; because business, under existing conditions, needs work. A year ago its greatest need was for luck. Readjustment of mental attitudes and physical applications is a necessary preliminary. Business must be evaluated on a bread-and-butter basis, with ham and eggs a possibility. The 1929 feasting on ice cream and cake and lobster a la Newburgh has been proved unsuited to satisfactory digestion.

In these columns of comment on business a year ago, it was said: "A Wall Street 'bust' will not demolish the gigantic industrial-commercial structure which has been built up in this country in the past six years." Speculation did its worst to disprove that statement, but the business structure still stands. It is somewhat in disorder. The shifting sands of the dunes have piled against it, blocking some of its doorways and cutting off from some of the occupants a part of their needed portion of light and air. But, even those who recently sported on the unstable ridges have turned to the work of putting the house of business in order, having been forced to see the folly of believing that an 18 percent increase in the net income of industry (shown by a comparison of 1927 and 1928 reports for Federal income taxes) justified an 80 percent increase in the value of industrial securities.

Perhaps the most difficult problem that faces business today is that of readjusting employment. The crash of stock exchange values did much to shake down the high peaks of prosperity. But, naturally, it did nothing to distribute opportunity evenly in this leveling process. This distribution is the task that business now is called upon to do. An excellent start in this work has been made in the earnest efforts which have been put forth for the expansion of construction undertakings. The extent to which these undertakings can absorb the man-power deprived of employment by the crash is problematical. A substantial portion of this man-power is not suited to the work that is offered and must wait for the openings which will eventually be provided as the needs of the construction programs stimulate production of the materials required. This process, it is generally estimated, will require about six months for its completion. Meanwhile, business will improve in direct proportion to the amount of thought and energy that is applied to its improvement.

An external factor of considerable influence in determining the rate of business recovery is the revision of the tariff act. This undertaking has been in the hands of Congress for almost a year. The uncertainty which has attended it and the hesitancy which it has caused in many lines of industry began to show effects in business about the middle of 1929. These effects persist, not only with respect to domestic purchases, but also in export markets where they are emphasized by the unsatisfactory position of exchange in a number of countries. Foreign trade of the United States expanded during 1929 in keeping with the general increase in industrial and commercial activities. Exports and imports both showed increases in comparison with 1928, the former a gain of 2.5 percent; the latter, one of 7.5 percent. The favorable trade balance, which was $939,000 in 1928, declined to $757,000 in 1929. There is some encouragement in the fact that manufactured and semi-manufactured articles constituted 72.6 percent of the 1929 exports, compared with 68.4 percent in 1928; but their proportion in imports also increased, from 50.8 percent to 52.3 percent.

In spite of the unfavorable influences which were exerted during the year, business was bigger and better in 1929 than it had ever been before. In fact, it was just a trifle too big; so that, although profits got more attention, in comparison with volume, than they had received in 1928, unit values were lower at the end of the year than they had been at the beginning. The average of three representative calculations of the prices of all commodities showed a decrease of 3 percent. The falling off in production during the last quarter of the year was caused more by decreasing demand than by decreased prices. Costs of production had been substantially reduced, also. Sales at retail were 1.9 percent larger than those in 1928, with a marked expansion in the chain-store system, which increased sales through this channel about 18 percent. Business failures were not so numerous in 1929 as they had been in 1928. The net liabilities, as reported by Dun, were $23,000,000 greater, however; chiefly because of large insolvencies which followed the stock market crash.

Agriculture paid a little better last year than it did in 1928. Cotton and wheat gave smaller returns. The potato crop had almost doubled its 1928 value. Live stock sold for slaughtering produced a substantially larger income, chiefly by reason of the higher price of hogs. An ambitious program of farm relief was set in motion, but it has not proved as smoothly working as was expected. The farmer needs the

(Continued on page 102)

Year-End Survey of Market Conditions

Summary of Fourteen Major Market Groups

Collated Statement of Statistical Data from the Annual Survey of Business Appearing on Pages 4 to 6

	Compared with same period a year ago		
	Better	**As Good**	**Not So Good**
Production in 1929	50 percent	36 percent	14 percent
Production in last quarter, 1929	30 percent	34 percent	36 percent
Sales in whole year, 1929	58 percent	27 percent	15 percent
Sales in last quarter, 1929	26 percent	26 percent	48 percent
Collections at Dec. 31, 1929	11 percent	66 percent	23 percent
Collections over year, 1929	13 percent	77 percent	10 percent
Outlook for business in first quarter, 1930	19 percent	43 percent	38 percent
Outlook for business during 1930	28 percent	54 percent	18 percent
General condition of business	29 percent	46 percent	25 percent

Relative condition, 100.4; relative price, 95.4. Prosperity index, 95.8.

Business Conditions and Outlook, January 1, 1930

Statistical Record Compiled from Data Obtained by the Oil, Paint and Drug Reporter In a Comprehensive Survey of All Divisions of the Major Markets in the Chemical, Dye, Oil, Paint, Drug, and Related Industries, and Presented In Percentages Based on Total Number of Firms in Each Group Which Furnished Requested Information

Industrial Chemicals

All Branches of the Trade

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	75%	25%	..
Production in last quarter, 1929.	33%	47%	20%
Sales in whole year, 1929	81%	14%	5%
Sales in last quarter, 1929	27%	38%	35%
Collections at Dec. 31, 1929	14%	70%	16%
Collections over year, 1929	24%	70%	6%
Outlook for business in first quarter, 1930	16%	46%	38%
Outlook for business during 1930.	17%	72%	11%
General condition of business..	36%	47%	16%

Relative condition, 102; relative price, 102.4. Prosperity index, 104.4.

Miscellaneous Chemicals

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	70%	30%	..
Production in last quarter, 1929.	30%	50%	20%
Sales in whole year, 1929	73%	18%	9%
Sales in last quarter, 1929	36%	37%	27%
Collections at Dec. 31, 1929	9%	64%	27%
Collections over year, 1929	9%	82%	9%
Outlook for business in first quarter, 1930	27%	46%	27%
Outlook for business during 1930	18%	73%	9%
General condition of business..	34%	50%	16%

Fertilizer Materials

All Branches of the Trade

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	42%	25%	33%
Production in last quarter, 1929.	31%	31%	38%
Sales in whole year, 1929	50%	19%	31%
Sales in last quarter, 1929	44%	19%	37%
Collections at Dec. 31, 1929	6%	69%	25%
Collections over year, 1929	6%	69%	25%
Outlook for business in first quarter, 1930	19%	56%	25%
Outlook for business during 1930.	25%	56%	19%
General condition of business..	28%	43%	29%

Relative condition, 99.9; relative price, 93.3. Prosperity index, 93.2.

Acids

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	80%	20%	..
Production in last quarter, 1929.	40%	60%	..
Sales in whole year, 1929	80%	20%	..
Sales in last quarter, 1929	20%	40%	40%
Collections at Dec. 31, 1929	20%	40%	40%
Collections over year, 1929	20%	60%	20%
Outlook for business in first quarter, 1930	..	40%	60%
Outlook for business during 1930.	..	75%	25%
General condition of business..	33%	44%	23%

Sodas, Bleach, Ammonia

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	100%	..	..
Production in last quarter, 1929.	25%	50%	25%
Sales in whole year, 1929	100%	..	..
Sales in last quarter, 1929	13%	50%	37%
Collections at Dec. 31, 1929	12%	88%	..
Collections over year, 1929	25%	75%	..
Outlook for business in first quarter, 1930	..	63%	37%
Outlook for business during 1930.	12%	88%	..
General condition of business..	36%	52%	12%

Ammoniates

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	25%	25%	50%
Production in last quarter, 1929.	25%	25%	50%
Sales in whole year, 1929	20%	40%	40%
Sales in last quarter, 1929	20%	20%	60%
Collections at Dec. 31, 1929	..	100%	..
Collections over year, 1929	..	100%	..
Outlook for business in first quarter, 1930	20%	60%	20%
Outlook for business during 1930.	20%	60%	20%
General condition of business..	16%	54%	30%

Arsenicals

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	33%	67%	..
Production in last quarter, 1929.	..	50%	50%
Sales in whole year, 1929	75%	25%	..
Sales in last quarter, 1929	25%	50%	25%
Collections at Dec. 31, 1929	25%	75%	..
Collections over year, 1929	50%	50%	..
Outlook for business in first quarter, 1930	25%	75%	..
Outlook for business during 1930.	25%	75%	..
General condition of business..	32%	59%	9%

Textile Chemicals

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	67%	33%	..
Production in last quarter, 1929.	43%	43%	14%
Sales in whole year, 1929	78%	11%	11%
Sales in last quarter, 1929	33%	22%	45%
Collections at Dec. 31, 1929	11%	78%	11%
Collections over year, 1929	33%	67%	..
Outlook for business in first quarter, 1930	22%	22%	56%
Outlook for business during 1930.	22%	56%	22%
General condition of business..	39%	41%	20%

Phosphates

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	100%	..	..
Production in last quarter, 1929.	40%	40%	20%
Sales in whole year, 1929	80%	..	20%
Sales in last quarter, 1929	40%	40%	20%
Collections at Dec. 31, 1929	20%	40%	40%
Collections over year, 1929	20%	40%	40%
Outlook for business in first quarter, 1930	..	60%	40%
Outlook for business during 1930.	20%	60%	20%
General condition of business..	40%	35%	25%

Coaltar Products

All Branches of the Trade

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	75%	25%	..
Production in last quarter, 1929.	19%	25%	56%
Sales in whole year, 1929	71%	23%	6%
Sales in last quarter, 1929	6%	29%	65%
Collections at Dec. 31, 1929	6%	63%	31%
Collections over year, 1929	6%	71%	23%
Outlook for business in first quarter, 1930	..	41%	59%
Outlook for business during 1930.	13%	54%	33%
General condition of business..	25%	41%	34%

Relative condition, 99.1; relative price, 100. Prosperity index, 99.1.

Coaltar Intermediates

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	83%	17%	..
Production in last quarter, 1929.	17%	..	83%
Sales in whole year, 1929	100%	..	..
Sales in last quarter, 1929	17%	..	83%
Collections at Dec. 31, 1929	17%	67%	16%
Collections over year, 1929	17%	67%	16%
Outlook for business in first quarter, 1930	..	33%	67%
Outlook for business during 1930.	..	67%	33%
General condition of business..	31%	32%	37%

Coaltar Crudes

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	40%	60%	..
Production in last quarter, 1929.	40%	40%	20%
Sales in whole year, 1929	40%	40%	20%
Sales in last quarter, 1929	..	60%	40%
Collections at Dec. 31, 1929	..	60%	40%
Collections over year, 1929	..	60%	40%
Outlook for business in first quarter, 1930	..	60%	40%
Outlook for business during 1930.	20%	60%	20%
General condition of business..	18%	55%	27%

Coaltar Colors

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	100%	..	..
Production in last quarter, 1929.	..	40%	60%
Sales in whole year, 1929	67%	33%	..
Sales in last quarter, 1929	..	33%	67%
Collections at Dec. 31, 1929	..	60%	40%
Collections over year, 1929	..	83%	17%
Outlook for business in first quarter, 1930	..	33%	67%
Outlook for business during 1930	25%	25%	50%
General condition of business..	24%	38%	38%

Potashes

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	..	50%	50%
Production in last quarter, 1929.	25%	25%	50%
Sales in whole year, 1929	50%	17%	33%
Sales in last quarter, 1929	67%	..	33%
Collections at Dec. 31, 1929	..	67%	33%
Collections over year, 1929	..	67%	33%
Outlook for business in first quarter, 1930	33%	50%	17%
Outlook for business during 1930.	33%	50%	17%
General condition of business..	26%	41%	33%

Cottonseed, Cake, Meal, Oil

All Branches of the Trade

Compared with 1928.

	Better.	As good.	Not so good.
Production in 1929	..	83%	17%
Production in last quarter, 1929.	17%	33%	50%
Sales in whole year, 1929	17%	50%	33%
Sales in last quarter, 1929	..	50%	50%
Collections at Dec. 31, 1929	17%	67%	16%
Collections over year, 1929	17%	83%	..
Outlook for business in first quarter, 1930	17%	33%	50%
Outlook for business during 1930.	17%	50%	33%
General condition of business..	12%	56%	31%

Relative condition, 98.1; relative price, 79.8. Prosperity index, 78.3.

Paint, Varnish Materials

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	67%	26%	7%
Production in last quarter, 1929.	23%	26%	51%
Sales in whole year, 1929	65%	22%	13%
Sales in last quarter, 1929	31%	11%	58%
Collections at Dec. 31, 1929	7%	67%	26%
Collections over year, 1929	13%	74%	13%
Outlook for business in first quarter, 1930	12%	30%	58%
Outlook for business during 1930.	16%	65%	19%
General condition of business..	29%	40%	31%

Relative condition, 99.8; relative price, 103.2. Prosperity index, 103.

Pigments

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	64%	18%	18%
Production in last quarter, 1929.	27%	18%	55%
Sales in whole year, 1929	55%	18%	27%
Sales in last quarter, 1929	36%	9%	55%
Collections at Dec. 31, 1929	9%	64%	27%
Collections over year, 1929	27%	64%	9%
Outlook for business in first quarter, 1930	20%	10%	70%
Outlook for business during 1930.	20%	60%	20%
General condition of business..	32%	33%	35%

Dry Colors

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	50%	40%	10%
Production in last quarter, 1929.	30%	40%	30%
Sales in whole year, 1929	45%	46%	9%
Sales in last quarter, 1929	36%	18%	46%
Collections at Dec. 31, 1929	..	82%	18%
Collections over year, 1929	..	91%	9%
Outlook for business in first quarter, 1930	9%	64%	27%
Outlook for business during 1930.	27%	55%	18%
General condition of business..	25%	54%	21%

Mixed Paints

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	69%	31%	..
Production in last quarter, 1929.	23%	31%	46%
Sales in whole year, 1929	77%	15%	8%
Sales in last quarter, 1929	31%	15%	54%
Collections at Dec. 31, 1929	8%	69%	23%
Collections over year, 1929	16%	69%	15%
Outlook for business in first quarter, 1930	8%	31%	61%
Outlook for business during 1930.	8%	77%	15%
General condition of business..	30%	42%	28%

Lacquer Materials

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	83%	17%	..
Production in last quarter, 1929	33%	17%	67%
Sales in whole year, 1929		17%	..
Sales in last quarter, 1929		..	67%
Collections at Dec. 31, 1929	17%	67%	16%
Collections over year, 1929	17%	67%	16%
Outlook for business in first quarter, 1930	16%	17%	67%
Outlook for business during 1930.	17%	67%	16%
General condition of business..	35%	34%	31%

Pyroxylin Lacquers

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	100%	..	..
Production in last quarter, 1929.	..	..	100%
Sales in whole year, 1929	75%	..	25%
Sales in last quarter, 1929	..	..	100%
Collections at Dec. 31, 1929	..	25%	75%
Collections over year, 1929	..	75%	25%
Outlook for business in first quarter, 1930	..	..	100%
Outlook for business during 1930.	..	67%	33%
General condition of business..	22%	21%	57%

Gums, Waxes, Shellac

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	47%	27%	26%
Production in last quarter, 1929.	12%	19%	69%
Sales in whole year, 1929	45%	35%	20%
Sales in last quarter, 1929	10%	10%	80%
Collections at Dec. 31, 1929	10%	40%	50%
Collections over year, 1929	15%	75%	10%
Outlook for business in first quarter, 1930	30%	15%	55%
Outlook for business during 1930.	25%	45%	30%
General condition of business..	24%	33%	43%

Relative condition, 98.1; relative price, 88.2. Prosperity index, 86.5.

Gums

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	..	33%	67%
Production in last quarter, 1929.	..	33%	67%
Sales in whole year, 1929	29%	43%	28%
Sales in last quarter, 1929	14%	29%	57%
Collections at Dec. 31, 1929	..	43%	57%
Collections over year, 1929	..	86%	14%
Outlook for business in first quarter, 1930	29%	28%	43%
Outlook for business during 1930.	14%	86%	..
General condition of business..	11%	48%	41%

Waxes

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	57%	14%	29%
Production in last quarter, 1929.	29%	..	71%
Sales in whole year, 1929	57%	14%	29%
Sales in last quarter, 1929	14%	..	86%
Collections at Dec. 31, 1929	14%	43%	43%
Collections over year, 1929	14%	72%	14%
Outlook for business in first quarter, 1930	29%	14%	57%
Outlook for business during 1930.	28%	29%	43%
General condition of business..	30%	23%	47%

Shellac

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	60%	40%	..
Production in last quarter, 1929.	..	33%	67%
Sales in whole year, 1929	50%	50%	..
Sales in last quarter, 1929	..	..	100%
Collections at Dec. 31, 1929	17%	33%	50%
Collections over year, 1929	33%	67%	..
Outlook for business in first quarter, 1930	33%	..	67%
Outlook for business during 1930.	33%	17%	50%
General condition of business..	28%	30%	42%

Dyestuffs and Tanstuffs

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	45%	33%	22%
Production in last quarter, 1929.	22%	22%	56%
Sales in whole year, 1929	45%	33%	22%
Sales in last quarter, 1929	22%	22%	56%
Collections at Dec. 31, 1929	11%	67%	22%
Collections over year, 1929	11%	67%	22%
Outlook for business in first quarter, 1930	33%	34%	33%
Outlook for business during 1930.	44%	56%	..
General condition of business..	29%	42%	29%

Relative condition, 100; relative price, 96.5. Prosperity index, 96.5.

Dyestuffs and Sizes

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	40%	40%	20%
Production in last quarter, 1929.	20%	20%	60%
Sales in whole year, 1929	40%	40%	20%
Sales in last quarter, 1929	20%	20%	60%
Collections at Dec. 31, 1929	..	80%	20%
Collections over year, 1929	..	80%	20%
Outlook for business in first quarter, 1930	20%	40%	40%
Outlook for business during 1930.	40%	60%	..
General condition of business..	22%	48%	30%

Tanning Materials

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	50%	25%	25%
Production in last quarter, 1929.	25%	25%	50%
Sales in whole year, 1929	50%	25%	25%
Sales in last quarter, 1929	25%	25%	50%
Collections at Dec. 31, 1929	25%	50%	25%
Collections over year, 1929	25%	50%	25%
Outlook for business in first quarter, 1930	50%	25%	25%
Outlook for business during 1930.	50%	50%	..
General condition of business..	38%	34%	28%

Petroleum and Derivatives

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	70%	20%	10%
Production in last quarter, 1992.	56%	33%	11%
Sales in whole year, 1929	83%	17%	..
Sales in last quarter, 1929	55%	27%	18%
Collections at Dec. 31, 1929	25%	67%	8%
Collections over year, 1929	33%	67%	..
Outlook for business in first quarter, 1930	8%	59%	33%
Outlook for business during 1930.	42%	58%	..
General condition of business..	47%	43%	10%

Relative condition, 103.7; relative price, 95.9. Prosperity index, 99.4.

Crude Petroleum

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	80%	..	20%
Production in last quarter, 1929.	100%	..	..
Sales in whole year, 1929	80%	20%	..
Sales in last quarter, 1929	80%	20%	..
Collections at Dec. 31, 1929	..	100%	..
Collections over year, 1929	20%	80%	..
Outlook for business in first quarter, 1930	..	80%	20%
Outlook for business during 1930.	40%	60%	..
General condition of business..	50%	45%	5%

Refinery Products

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	60%	40%	..
Production in last quarter, 1929.	20%	60%	20%
Sales in whole year, 1929	86%	14%	..
Sales in last quarter, 1929	33%	34%	33%
Collections at Dec. 31, 1929	43%	43%	14%
Collections over year, 1929	43%	57%	..
Outlook for business in first quarter, 1930	14%	43%	43%
Outlook for business during 1930.	43%	57%	..
General condition of business..	43%	43%	14%

Naval Stores

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	78%	11%	11%
Production in last quarter, 1929.	56%	33%	11%
Sales in whole year, 1929	78%	..	22%
Sales in last quarter, 1929	56%	22%	22%
Collections at Dec. 31, 1929	22%	67%	11%
Collections over year, 1929	22%	78%	..
Outlook for business in first quarter, 1930	22%	45%	33%
Outlook for business during 1930.	22%	67%	11%
General condition of business..	45%	40%	15%

Relative condition, 103; relative price, 90.1. Prosperity index, 92.8.

Flaxseed and Linseed Oil

All Branches of the Trade

	Compared with 1928. Better.	As good.	Not so good.
Production in 1929	60%	20%	20%
Production in last quarter, 1929.	40%	20%	40%
Sales in whole year, 1929	60%	40%	..
Sales in last quarter, 1929	25%	..	75%
Collections at Dec. 31, 1929	..	75%	25%
Collections over year, 1929	..	100%	..
Outlook for business in first quarter, 1930	..	80%	20%
Outlook for business during 1930.	20%	60%	20%
General condition of business..	26%	49%	25%

Relative condition, 100.1; relative price, 123.5. Prosperity index, 123.6.

Drugs and Fine Chemicals

All Branches of the Trade

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	61%	30%	9%
Production in last quarter, 1929.	26%	44%	30%
Sales in whole year, 1929	79%	17%	4%
Sales in last quarter, 1929	29%	21%	50%
Collections at Dec. 31, 1929	4%	76%	20%
Collections over year, 1929	8%	92%	..
Outlook for business in first quarter, 1930	4%	48%	48%
Outlook for business during 1930.	16%	60%	24%
General condition of business..	28%	49%	23%

Relative condition, 100.5; relative price, 107.8. Prosperity index, 108.3.

Alcohols

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	33%	67%	..
Production in last quarter, 1929.	..	67%	33%
Sales in whole year, 1929	50%	50%	..
Sales in last quarter, 1929	75%	..	25%
Collections at Dec. 31, 1929	..	100%	..
Collections over year, 1929	..	100%	..
Outlook for business in first quarter, 1930	..	100%	..
Outlook for business during 1930.	25%	75%	..
General condition of business..	23%	70%	7%

Alkaloids

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	25%	75%	..
Production in last quarter, 1929.	25%	25%	50%
Sales in whole year, 1929	80%	20%	..
Sales in last quarter, 1929	20%	20%	60%
Collections at Dec. 31, 1929	20%	60%	20%
Collections over year, 1929	20%	80%	..
Outlook for business in first quarter, 1930	..	20%	80%
Outlook for business during 1930.	..	100%	..
General condition of business..	24%	50%	26%

Pharmaceutical Chemicals

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	100%	..	..
Production in last quarter, 1929.	50%	38%	12%
Sales in whole year, 1929	100%	..	..
Sales in last quarter, 1929	43%	29%	28%
Collections at Dec. 31, 1929	..	88%	12%
Collections over year, 1929	12%	88%	..
Outlook for business in first quarter, 1930	..	75%	25%
Outlook for business during 1930.	12%	88%	..
General condition of business..	40%	51%	9%

Wood Chemicals

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	50%	25%	25%
Production in last quarter, 1929.	13%	50%	37%
Sales in whole year, 1929	72%	14%	14%
Sales in last quarter, 1929	..	25%	75%
Collections at Dec. 31, 1929	..	63%	37%
Collections over year, 1929	..	100%	..
Outlook for business in first quarter, 1930	12%	13%	75%
Outlook for business during 1930.	25%	..	75%
General condition of business..	22%	36%	42%

Botanical Drugs

All Branches of the Trade

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	11%	78%	11%
Production in last quarter, 1929.	..	78%	22%
Sales in whole year, 1929	25%	50%	25%
Sales in last quarter, 1929	9%	73%	18%
Collections at Dec. 31, 1929	..	64%	36%
Collections over year, 1929	..	56%	44%
Outlook for business in first quarter, 1930	40%	50%	10%
Outlook for business during 1930.	50%	40%	10%
General condition of business..	17%	61%	22%

Relative condition, 99.5; relative price, 88.2. Prosperity index, 87.8.

Domestic Botanicals

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	..	75%	25%
Production in last quarter, 1929.	..	75%	25%
Sales in whole year, 1929	..	75%	25%
Sales in last quarter, 1929	..	100%	..
Collections at Dec. 31, 1929	..	75%	25%
Collections over year, 1929	..	67%	33%
Outlook for business in first quarter, 1930	75%	..	25%
Outlook for business during 1930.	75%	..	25%
General condition of business..	19%	58%	23%

Imported Botanicals

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	20%	80%	..
Production in last quarter, 1929.	..	80%	20%
Sales in whole year, 1929	43%	43%	14%
Sales in last quarter, 1929	14%	57%	29%
Collections at Dec. 31, 1929	..	57%	43%
Collections over year, 1929	..	50%	50%
Outlook for business in first quarter, 1930	17%	83%	..
Outlook for business during 1930.	33%	67%	..
General condition of business..	16%	65%	19%

Essential Oils

All Branches of the Trade

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	25%	63%	12%
Production in last quarter, 1929.	43%	43%	14%
Sales in whole year, 1929	55%	27%	18%
Sales in last quarter, 1929	18%	27%	55%
Collections at Dec. 31, 1929	18%	73%	9%
Collections over year, 1929	18%	82%	..
Outlook for business in first quarter, 1930	36%	46%	18%
Outlook for business during 1930.	50%	40%	10%
General condition of business..	33%	50%	17%

Relative condition, 101.6; relative price, 78.7. Prosperity index, 80.

Domestic Essential Oils

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	20%	60%	20%
Production in last quarter, 1929.	50%	50%	..
Sales in whole year, 1929	50%	33%	17%
Sales in last quarter, 1929	17%	33%	50%
Collections at Dec. 31, 1929	17%	83%	..
Collections over year, 1929	17%	83%	..
Outlook for business in first quarter, 1930	33%	34%	33%
Outlook for business during 1930.	33%	50%	17%
General condition of business..	30%	53%	17%

Imported Essential Oils

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	33%	67%	..
Production in last quarter, 1929.	33%	34%	33%
Sales in whole year, 1929	60%	20%	20%
Sales in last quarter, 1929	20%	20%	60%
Collections at Dec. 31, 1929	20%	60%	20%
Collections over year, 1929	20%	80%	..
Outlook for business in first quarter, 1930	40%	60%	..
Outlook for business during 1930.	75%	25%	..
General condition of business..	38%	46%	16%

Oils, Fats and Greases

All Branches of the Trade

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	42%	33%	25%
Production in last quarter, 1929.	37%	27%	36%
Sales in whole year, 1929	57%	36%	7%
Sales in last quarter, 1929	36%	14%	50%
Collections at Dec. 31, 1929	14%	64%	22%
Collections over year, 1929	14%	86%	..
Outlook for business in first quarter, 1930	36%	14%	50%
Outlook for business during 1930.	31%	38%	31%
General condition of business..	33%	39%	28%

Relative condition, 100.5; relative price, 88. Prosperity index, 88.4.

Animal Oils and Fats

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	50%	50%	..
Production in last quarter, 1929.	50%	25%	25%
Sales in whole year, 1929	60%	40%	..
Sales in last quarter, 1929	60%	20%	20%
Collections at Dec. 31, 1929	20%	40%	40%
Collections over year, 1929	20%	80%	..
Outlook for business in first quarter, 1930	80%	20%	..
Outlook for business during 1930.	60%	40%	..
General condition of business..	50%	39%	11%

Fish Oils

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	20%	40%	40%
Production in last quarter, 1929.	40%	20%	40%
Sales in whole year, 1929	20%	60%	20%
Sales in last quarter, 1929	20%	20%	60%
Collections at Dec. 31, 1929	20%	60%	20%
Collections over year, 1929	20%	80%	..
Outlook for business in first quarter, 1930	..	20%	80%
Outlook for business during 1930.	..	40%	60%
General condition of business..	17%	43%	40%

Vegetable Oils

	Compared with 1928.		
	Better.	As good.	Not so good.
Production in 1929	67%	..	33%
Production in last quarter, 1929.	..	50%	50%
Sales in whole year, 1929	100%	..	..
Sales in last quarter, 1929	25%	..	75%
Collections at Dec. 31, 1929	..	100%	.
Collections over year, 1929	..	100%	..
Outlook for business in first quarter, 1930	25%	..	75%
Outlook for business during 1930.	33%	34%	33%
General condition of business..	31%	36%	33%

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Trade Leaders Discuss Business Conditions

Executives of National Organizations in the Chemical, Dyestuffs, Oil, Paint, Drug, Fertilizer, and Related Industries Give Their Opinions for the Information of Readers of the Reporter

Julius H. Barnes

Chamber of Commerce of the United States, Washington

Chairman, National Business Survey

(Excerpts from a radio address delivered January 25 and furnished to the Oil, Paint and Drug Reporter by the Chamber of Commerce of the United States.)

November 23, just following the stock market crash, with rumors and exaggerations running with disastrous effect through the country, I ventured to say that it was a time in America for collective common sense. Shortly thereafter, December 5, in Washington, at the suggestion of President Hoover, 400 business leaders of America gathered to consider the situation.

It was evident that in the minds of the President and of the leaders in the business world, there was a confidence in the general level of intelligence, restraint, prudent judgment and common sense of the American people. It was believed that to strip the falsity and exaggeration from current rumors and in their stead to disseminate exact and accurate information would be the basis of individual judgment governing individual action. It was felt that American judgment, supplied with knowledge of accurate conditions, could be trusted to reach dependable conclusions.

The total public construction definitely reported to the Secretary of Agriculture as actually contemplated for 1930 is expected to reach seven billion dollars, and this exclusive of all residence, commercial and industrial construction which last year amounted to three billion more. The significance of this will appear when one realizes that the normal construction in this country runs about eight billion dollars a year, and the major factor in the upset of the business world was the shrinkage in residence construction last year by 800 million dollars.

Obviously, construction cannot bid against security speculation for floating credits, and last year's call money of ten and twelve and fifteen per cent was directly reflected into the shrinkage in residence and general construction.

One of the reassuring factors in the mind of the President and the business world two months ago was the evidence that credits would be released so that money at reasonable rates would be available for construction activities. How accurate this judgment was is shown not alone by the fall in interest rates but by the fact that two weeks ago the total placements of new bond issues in New York were the largest week in history.

We were told in New York that savings banks deporitors were withdrawing millions of their savings to make good their losses in stock speculation. At this distance, and looking back, we can see that this was partly true. In New York state the shrinkage in total savings in the month of October was high. In November there was a further reduction; but in December savings began to increase again. We were told in October and November that long lines of policyholders beseiged the offices of the insurance companies to borrow money on their policies to pay losses in stock speculation, and again at this distance we can see that this was partly true and partly wrong. The significance of these two items for good or ill rested in the truth as to whether these drafts upon accumulated savings represented losses which impaired the capital of numberless thrifty people, or whether they rested in some other and reassuring motive. So in the test as to what became of these withdrawals and others like them we examine with care the list of number of stockholders in the major standard investment companies and here an interesting and significant development is shown.

For example, the American Telephone & Telegraph Company during this period of stock decline and supposedly period of liquidation increased its shareholders from 450,000 to 470,000; General Motors Corporation from 117,000 to 198,000; The Packard Motor Car Corporation from 11,000 to 26,000; the Woolworth Company nearly doubled its number of stockholders. A large mail order house more than doubled its number of stockholders. The United States Steel Corporation, with a high priced stock, added over 6,000 new stockholders. The Standard Oil of New Jersey, a standard in the oil field, added 14,000 new stockholders. In the railroad field the Pennsylvania Railroad gained nearly 15,000 new stockholders.

So also we heard that the Christmas trade total, under the blight of security losses, would fall behind the comparison of a year ago, but it did not prove true. We heard that it was also expected that retail trade would fall materially in the early weeks of the new year. It is still difficult to get the exact measures of this retail trade these last few weeks, but in the case of one of the older and larger low-priced chain stores the first and second weeks of January showed mounting totals of retail sales greatly exceeding the period of a year ago.

Motion pictures report for three larger circuits attendance in January of this year exceeding that of a year ago by 10 percent, 10½ percent and 15 percent. Magazine advertising in two of the largest weeklies now definitely fixed for January and February issues exceed in one case a year ago by 3 percent and in the other by 10 percent. This means a large consumption of paper and larger paper mill operation, larger wage rolls in those paper mills.

In gasoline the consumption of last year increased 13 percent over the year before; the projected consumption for this year is estimated at 8 percent more than the year just closed, a careful projection which carries the indication of more employment in oil stations, garages and repair shops. Car equipment works and locomotive building, relatively slack for the last five years, are now busy on railroad programs and have absorbed skilled workmen released seasonally from the building trades. New and heavy rails are leaving the steel mills every day to build or rebuild railroad beds, wherever frost or snow allow that work to be carried out. The checking of the steel industry for the first half of January indicated about 75 percent of capacity against 50 percent in December. The fabricating plants of the steel industry are now so supplied with bridge girders, ship frames and building construction that in at least one important instance no new deliveries can be promised before next August. Lumber, a sick industry for the last few years, indicates that current orders are running 30 percent more than a year ago.

To give the whole picture—textile manufacturers of cotton, silk and wool all continue to experience perplexing problems. The shift of social habits, the closed cars, the heated homes and heated conveyances, the laboratory competition of rayon against natural fiber, these subject the textile industry to problems of unusual difficulty and they are not yet solved.

The measures of Pullman service, hotel reservations and winter resort travel show no dislocation of the winter habits of our people. New life insurance which in October was $787,000,000 and in November, $762,000,000, rose in December to $841,000,000. And in the outlook for foreign trade there is a new reassurance in the acceptance and use of the Young plan international bank. It means obligations defined and the resultant relaxation of credit for the stimulation of industry abroad.

Unemployment and the distress of workers has been used throughout all history as the occasion for reducing labor charges. In America wage scales are manifestly higher than anywhere in the world. Yet business leadership actuated by a new philosophy of economics and actuated as well by very human and sympathetic motives voluntarily expressed a desire to maintain these high wage scales and living standards. It is significant, indeed, in the vast world of industry, complex and extended, some prosperous and some in distress, there has been almost no deviation from the determination to maintain elaborate earnings.

The avenue of most direct absorption of any margin of unemployment, large or small, in any community, lies not alone in its larger building projects, the construction of public works, or office buildings, or factories or individual homes, but it rests also in these present weeks in the more modest phases of repairs and re-equipment. The extra sunporch, new fixtures for the bathroom, new floor in the cellar, painting and varnishing, repairing and overhauling of the family auto, and doing now all these things under thrifty and prudent decisions may help to maintain the even flow of business stability while the larger programs are working out their necessary plans.

Large industries have set the example. The railroad programs have been advanced and maintained; new equipment ordered, repairs and maintenance expedited. The great utilities that generate and distribute power are executing a program of total expenditures that will exceed last year. The great agencies of communication, telepnone and telegraph, are advancing their year's plans aggregating more to be spent in equipment and wages than even the unprecedented totals of the high-water year just closed. Steel companies are planning expansion and rebuilding and re-equipment investing millions in wages in the confidence that the inevitable growth of American business will require enlarged and improved facilities before they are completed.

Blueprints and specifications are working nights. It is a time for America's smaller industries to give the same care and study with the same courageous ventures into repairs, improvements and expansions that they may find justified by their own prudent judgment.

Developments in these last few weeks warrant a confidence that this great and significant effort for the checking of business recession before it mounts into general unemployment and distress can be successful. It is a time for collective common sense and for the most intelligent voluntary teamplay.

Lammot du Pont

E. I. du Pont de Nemours & Co., Wilmington, Del.

President, Manufacturing Chemists' Association

Nearly every business is somewhat seasonal, and the chemical industry is no exception. In considering the state of business at any time, it is therefore essential to compare the current condition with the same period in previous years. On this basis of comparison, business in the chemical industry, judged by E. I. du Pont de Nemours & Co., is good.

Last October, business was ahead of the previous year, with a downward tendency. During November, business was somewhat below the previous year, with a continuing downward tendency. During December, business was still below the previous year, but with a somewhat irregular increasing tendency. January starts off with a further tendency toward improvement, bringing the level up to about the same as the previous year. As a year ago the industry was breaking records, the fact that we are now tending toward a duplication of those records is certainly not a situation to complain of, but we must always bear in mind that the chemical industry in this country is comparatively young and should, over a period of years, be continually breaking records.

The outlook for the immediate future seems fair. We shall probably continue about the same level, as to volume, as a year ago, with a substantial improvement setting in within two or three months.

Robert E. Tally

United Verde Copper Company, New York

President, American Mining Congress

The copper industry, like all other basic industries, suffered from overproduction, and the general business depression has resulted in a falling off in the consumption of copper.

Many of the mines have curtailed production, and it is believed the present price of the metal will be maintained and that the copper industry will enjoy a uniform degree of prosperity during the year 1930.

Robert C. White

Pharmaceutical Engineer, Philadelphia

President, Insecticide and Disinfectant Manufacturers' Association

I believe that conditions warrant full confidence in the present and near business future in our field. While there are no indications of sudden increase, business is progressing sanely and steadily and would indicate that the year 1930 would be quite satisfactory. Undoubtedly more effort will be made to obtain business, and competition may be keener, which conditions always indicate better products, and consequently better business. No legislation is in sight to cause apprehensiveness in our particular line, and there are indications that our industry as a whole is striving towards still higher ethics.

Victor E. Williams

Monsanto Chemical Works, New York

President, Salesmen's Association of the American Chemical Industry

Comparatively speaking, I feel that the business depression which we are now passing through should be one of very short duration. This is based wholly on the fact that the falling off in business cannot be attributed to large stocks of high-priced commodities being held by the consumer. All the way along the line for some time back companies have been buying on a so-called "hand-to-mouth basis," so that when the stock market crash came inventories were actually normal, and in many cases below normal.

At the end of each year there has always been a tendency on the part of buyers to lower their stock, and while this year's cutdown is perhaps a little more drastic than was the case in the past four or five years, the fact remains that the chemical business has shown, since the first of the month, an upward trend.

While purchases started off slowly early in January, there has been a gradual increase, and I am quite sure that this upward trend will continue, so that in the first three months of this year business will be about on an even basis with the first three months of last year. This momentum will be carried on throughout the last three quarters of the year, and I am quite sure that, when the year 1930 draws to a close, the chemical industry will find that business is equal to, if not greater than, that of 1929. This is inevitable, because the chemical industry is basically sound and so far reaching that even should one or two other industries be affected by poor business, the chemical industry would not feel it.

In whole, the present feeling is a psychological one, and, with optimism as the watchword of everyone, good business can but result.

Ernest T. Trigg

John Lucas & Co., Philadelphia

President, Agricultural Insecticide and Fungicide Manufacturers' Association

I consider that the outlook for business for 1930 is good. I have a feeling that as the year goes on, and especially as soon as the spring opens up and construction opportunities start, there should be a very good paint and varnish business.

Clinton H. Crane

St. Joseph Lead Company, New York

President, Lead Industries' Association

A review of the statistics of the lead industries for 1929 indicates that a record for world lead production was established. This new mark is estimated at 1,930,000 tons, which figure will probably be found to be low when final returns are in. The United States, however, which accounts for about 35 percent of world production, probably failed to reach a new high level. Domestic production is estimated at 687,000 tons, an improvement over 1928, but still short of the mark established in 1926 of 696,000 tons. Increased production in the United States, Germany, Australia, Mexico and Peru is largely responsible for the world increase, while Spain and Tunis indicate declines.

The price curve for 1929 showed two extreme fluctuations, a peak in the Spring and a depression in the Fall. The average price in 1929 of 6.833 cents per pound, New York, was more than half a cent higher than in 1928—6.305 cents.

The causes behind these price fluctuations again illustrate the strong influence of price upon production. In February, the Mexican revolution threatened to shut off supplies of lead from that source and sent the price of lead to a peak of 7.875 cents a pound, abnormally stimulating production elsewhere. When the Mexican situation became settled, prices tumbled to 7 cents. As the adjustment of pro-

duction to consumption of lead is a slow process, due to the fact that at least sixty days elapses between mine production and finished pig lead, stocks of refined pig lead in the United States and Mexico, which in April were 35,000 tons, increased to 70,000 tons in September as the over-stimulated production failed to move into consumption. This caused another unfortunate price fluctuation, this time a sudden drop to 6.25 cents, just at the time of the stock market crash. The price remained at this level until the end of the year. As a result, production was decreased about 10 percent by many producers in November and December, an action which is beginning to show its effect in reduced stocks as buying of lead continues good.

Of the three principal industries using lead, storage battery, lead-covered cable, and paint manufacture, which account for about 75 percent of domestic lead consumption, the first two have experienced an excellent year. As a result of the stimulus imparted by a record automobile production of 5,600,000 cars, it is likely that more lead went into storage batteries in 1929 than ever before. In 1930, automobile manufacturers can hardly look for another record-breaking year, but authorities seem generally to agree that no serious decline in output need be expected. Furthermore, the replacement market for batteries is an important stabilizing influence, and with more motor cars on the road than ever before the storage battery business has nothing to fear in looking ahead. In addition, storage batteries are finding enlarged outlets in industrial trucks, mine locomotives, public utilities, and other uses.

It is estimated that cable makers in 1929 used 200,000 tons of lead, an increase of 11 percent over the 1928 high. This industry may be expected in 1930 to continue to increase its consumption, as telephone and other utility companies have almost without exception announced larger programs for expansion and improvements for this year.

Although no final statistics on lead pigments are yet available, those at hand indicate that 1929 was a happier year for them than was 1928. Sales of white lead in oil, the most important of these pigments, will undoubtedly show moderate improvement over 1928, as will also dry white lead. It can be conservatively estimated that sales of white lead were in the neighborhood of 160,000 tons as compared with 154,000 in 1928. Competition among the white paint pigments has been extremely keen for a number of years, and white lead, long the established standard white pigment, naturally has had to bear the brunt of competition from newer products on the market. These figures are therefore encouraging in that they indicate that the intrinsic value of white lead as a paint material may again assert itself.

Red lead and litharge have also experienced improvement in the past year. A good part of this increase is undoubtedly due to the use of these pigments in storage battery manufacture and the use of litharge in oil refining. Basic lead sulphate and orange mineral probably showed slight improvement in 1929 over 1928.

H. S. Chatfield

Mac-lac-Kasebier-Chatfield Corporation, New York

President, National Paint, Oil and Varnish Association

Our conception of the general business conditions, particularly referring to shellac, is that, as the year progresses, business will improve, and each succeeding quarter, we think, should be better than the preceding one.

We are warranted in believing, from the business that has been placed during the first ten days of the new year, that the volume of shellac consumed during the first quarter of this year will be equal to the same period last year. One of the reasons for this is the comparative low price, and always when shellac is cheap or on a comparatively low range of values, the volume of consumption increases.

E. J. Probeck

Jones-Dabney Company, Louisville

President, Federation of Paint and Varnish Production Clubs

We find that most consumers are very cautious in placing orders, and are ordering only material absolutely needed. Consequently, orders are smaller in size, and rush shipments predominate. Most companies seem to be fairly busy, and at the present time on the increase. The automobile business, of course, is increasing every day, as are also the size orders from automobile concerns. The furniture business is rather dull at the present time, which, however, is usual at this time of the year.

As a whole, I should say that business is about 75 to 85 percent normal, as regards the use of industrial finishes.

Wells Martin

Martin Varnish Company, Chicago

President, American Paint and Varnish Manufacturers' Association

More than a hundred million Americans live and work in some kind of building.

Nearly all of the millions of buildings so used require some quantity of some type of paint, varnish, or lacquer finish each year.

Therefore, our market is no more a vanishing market than is the American nation a vanishing nation.

Watchful waiting without definite action is unsafe in modern business.

In my opinion, our industry will enjoy a good year in 1930.

J. Smylie Herkness

Charles Eneu Johnson & Co., Philadelphia

President, National Association of Printing Ink Makers

I look forward to a good healthy business in our field for 1930. The effect of the stock market crisis was profound, and it naturally will take the general public some time to recover its bearing. On the other hand, constructive forces have been at work, which were not at hand in previous crisis, and I believe that by the middle of the year we will find an improvement over trade at a similar period of last year, and one possibly unaccompanied by speculation.

E. H. Patterson

G. W. S. Patterson & Co., New York

President, Varnish Gum Importers' Association

Since the change from deep pessimism to reasonable optimism on the part of our business friends brought about by the prompt action of our president in "doing his bit" to restore normalcy, there has been a decided change in confidence and in the number of orders booked compared with our experience during the months of November and December, last.

With respect to the future, while we do not expect, nor are we looking for, a boom in general trade and industry, we shall be very much surprised indeed, now that wild speculation in Wall Street has passed into history and funds in large volume are available for trade and industry, if business transactions during the coming Spring and throughout the year are not as satisfactory as during 1929. We regard the outlook as being most reasonably promising.

R. J. Clemens

Standard Glass & Paint Company, Des Moines, Iowa

President, National Association of Paint Distributors

This is, of course, the off season for our business, and it is too early to determine the future status of the business, but it our opinion that business will be at least normal during the early part of 1930.

Fall business closed with a volume just a little above normal, and there is nothing to indicate that Spring business will do anything but proceed on the same basis.

L. W. Rowell

Swift & Co., Chicago

President, National Fertilizer Association

The fertilizer manufacturer has but one customer, the farmer, and our volume and our prosperity go hand in hand with the farmer's prosperity.

I am glad to say that it seems to be the consensus of opinion of the people close to agriculture that the farmer is better off than he was a year ago, and that there is good reason to believe that he will consume as much, if not more, fertilizer during the coming year as in the year past, which was a fairly satisfactory year for the fertilizer industry, from a volume standpoint.

More than 48,000 farmers were recently interviewed in regard to the profit secured from the use of fertilizer, and an average of the replies shows that each dollar invested in fertilizer returns $3.54 additional profit.

More and more farmers are becoming conscious of the necessity of getting better returns from fewer acres.

S. Barksdale Penick

S. B. Penick & Co., New York

President, American Drug Manufacturers' Association

The present state of business in the manufacturing field of the drug industry, I think, can be reported as satisfactory.

It must be remembered that, at this period a year ago, the drug industry in its entirety was experiencing almost an unprecedented demand through the prevalence of the influenza epidemic in this country. Since this abnormal condition existed, it is necessary rather to compare conditions of today with those of 1928.

There is every reason to believe that progress will be made through the coming year; since prices are not inflated, nor inventoried. Competition is probably somewhat keener in all fields, requiring greater effort to maintain a good headway.

If the question of a tariff can be soon disposed of, I feel confident the main cause of the slight hesitation in business at the moment will be largely removed.

H. Sheridan Baketel, M.D.

Reed & Carnrick, Jersey City, N. J.

President, American Pharmaceutical Manufacturers' Association

We are entering 1930 with every hope and expectation that the year will bring to us business in the usual amount. We have every confidence that we shall not only hold our own, but advance.

Naturally the pharmaceutical industry cannot expect record-breaking months, when illness is at a low ebb. We realize that some of the most prosperous years for manufacturing pharmacy have been during periods of marked general business depression, and vice versa.

I feel that it is incumbent upon us as manufacturers to continuously sound the notes of optimism, because I believe that much of this talk of poor business is a condition of mind. When men are listening consistently to pessimism, they naturally become conservative, and do everything in their power to conserve their resources.

Much unfounded rumor is being broadcast. For instance, there has been a story afloat that one of the leading department stores in New York, with 12,000 employees, were alleged to have laid off 6,000. As a matter of fact, the president of the company said they had reduced their force by 28 employes, but that they had added 233 additional workers.

We understand that the automobile industry is very hard hit, but I was advised early in January that if I wished to buy a new Packard it must be purchased before midnight, January 11, at which time the price was to be advanced $110, and I would receive no additional allowance on my old Packard. I know of Ford and Chevrolet county dealers who are fearful that they will not be able to obtain as many cars as they want for winter business. This scarcely looks as if the automotive industry was suffering from particularly hard times.

The members of this association are definitely and busily at work, carrying out their anticipated plans for pursuing business more aggressively than ever during 1930. Many of the houses have materially increased their advertising appropriations, have put on more salesmen and detail men, and are getting out added literature for the physicians. Indeed, I might say that the entire association is girding up its loins and is out seeking business as never before.

We are working in close conjunction with the government control officials to the end that there shall be a real understanding and a proper solution of our mutual problems. In correspondence with various members of the association, they advise me that they are most hopeful of a successful business year, and I know that many of them are preaching the gospel of good times, not only through the written word, but through the talks of their many field representatives.

The Chamber of Commerce of the United States for the week ending January 11 notes that there has been a big increase in savings bank deposits; the amount of life insurance being written is steadily rising; paper and pulp activities are at a high level; the trend of public utilities remains upward; rayon is expanding, and silk maintains its activity; construction reports the usual seasonal dip, but with a more encouraging outlook for the coming months, and a survey of conditions made by the chambers of commerce in Sacramento, Duluth, Wilmington, Long Island City, Springfield, Mo., Rockford, Ill., Milwaukee, New Haven, Winfield, Kans., and Fort Worth show that "employment conditions are almost universally normal." The one section of the country where employment is below normal is Texas, but that situation is attributed "to the large influx of workers from all other parts of the country."

The conference is endeavoring to get definite information on construction projects and local employment situations; so that wholesalers and retailers may base the orderly conduct of their business on accurate information, instead of baseless or exaggerated rumors.

We purpose to do everything in our power to raise the plane of manufacturing pharmacy, and to carry on our business with efficiency, economy, and the maximum of service.

If every one connected with the industry will put his shoulder to the wheel and will do his part toward making business good, business will be good.

V. M. O'Shaughnessy

Rossville Commercial Alcohol Corporation, New York

President, Industrial Alcohol Institute

In my judgment stocks are very low throughout the country, but there will be immediately after the inventory period, and for probably two months, a buying on the part of purchasing agents for spot, or nearly spot, requirements, which will mean that factory production will be somewhat below level but at an increasing rate.

The amount of money to be spent by industries in replacements, repairs, and new construction, as stated before at the meeting with the press, together with the large amount to be spent for public works, will be bound to put a tremendous buying power in effect.

I anticipate that, if the programs projected are completed, the year 1930 by the close will be as good a year as 1929, and I feel that business will be on a very sound basis.

Charles A. Pearce

Colgate-Palmolive-Peet Company, Chicago

Representing American Soap and Glycerin Producers

We believe that business will gradually gather momentum during the progress of the year and that 1930 will, at its close, show a satisfactory volume.

B. H. Old

B. H. Old & Co., New York

President, American Spice Trade Association

It is more difficult than usual this year to prognosticate with any degree of accuracy the future of the business in spices for the coming year.

The stocks of articles are rather acutely and, possibly, unsafely small. This condition so far has been offset by the stringent hand-to-mouth buying pursued by the manufacturers and grinders. This may create a condition of inadequate supplies, resulting in sharp and heavy advance; for instance, that condition occurred in ginger this year, where the African crop, which could have been bought by anticipation around 12½ cents to 13 cents per pound, advanced to 17½ cents. Cochin gingers advanced about 3 cents per pound on similar conditions.

In looking over the figures of the American Spice Trade Association, showing the imports for the eleven months up to the end of November, we see that black pepper imports were about 10 percent less and white pepper about 12 percent less than for the corresponding period of last year, when imports were none too heavy.

Mustard seed shows an increase, with figures of 15,852,007 pounds, against imports for the eleven corresponding months of last year of 13,447,271 pounds. There is rather an interesting situation in Washington in connection with mustard seed and the tariff, as the house bill and the senate bill have returned mustard seed at 2 cents per pound—double the present duty. This was done at the request of the California growers of mustard seed, who, I am informed, produce in total only about 250,000 pounds.

A number of the members of the spice trade have made representations to their congressmen and senators, protesting against this increase of duty, and a great many of the spice manufacturers would like to see mustard seed on the free list instead of carrying even the present duty of 1 cent per pound. A committee of three of our association went to Washington to attend the hearing before the house committee, giving them the facts in the case, but the bill was nevertheless reported out of the committee at 2 cents per pound, notwithstanding it was proven conclusively that not only an insufficient quantity of mustard seed could be produced by the State of California, but in addition to which the manufacturers on the above-mentioned committee pointed out to the congressional committee that foreign mustard seed had to be used in blending the California seed in order to make a manufactured mustard flour of the proper quality.

It is hoped that recent representations made to the house and to the senate will bring reconsideration of these facts and a favorable report on the amendment of Senator Phillips Lee Goldsborough of Maryland, who has

proposed an addenda to the bill of 1 cent per pound, the same as the present rate.

Importations of cloves show a marked decrease for the eleven months of 1929, compared with the corresponding eleven months of the previous year, and stocks of this spice are exceedingly scarce.

Importations of nutmegs, mace, ginger, cassia (or cinnamon) are practically the same as last year, while red peppers are less.

When this article is written it is the time of the year when our trade is at the "slack" demand, due to inventory-taking and end-of-the-year clean-ups.

Spices are a peculiar commodity, in that during times of great prosperity they do not increase in consumption, while their per capita use is so small that no householder thinks of their serving as articles of economy.

Lee M. Hutchins

Hazeltine & Perkins Drug Company, Grand Rapids, Mich.

President, National Wholesale Druggists' Association

The volume of business during the year 1929, composed of a greater number of classes and very large net profits, has never been equaled in the history of the United States. Several times during the last two or three years of business life of this country we have, so to speak, worked ourselves up to a climax in business achievements, only to be interrupted, either through imaginary or real causes, and have been obliged to clear ourselves financially and, as we say, get back to fundamentals.

May we cast our mind's eye back to October of 1929 and just imagine that, if we had finished the entire year at the pace at which we had been going, and then imagine the second time as to what the result would have been after we stepped over into the new year, and at that time what our starting point would have been throughout industrial, commercial and banking lines? When all is said and done, values were inflated and the "Almighty Dollar" had assumed a false basis.

In this month of January, 1930, we find ourselves like a naughty boy who has been thoroughly spanked, and, as soon as the sore spots have ceased their burning, we verily believe that we shall be ourselves again.

Previous to our recent depression there was so much idle money in the United States that it sought almost any kind of investment that would by any calculation whatever bring good returns. We now find ourselves in the period of recovery, and the man, or the institution, that is at the present time worthy of credit, can have all of the necessary capital that his condition will allow and at a very modest rate of interest. There are, however, thousands of people who have been severely injured during the last two or three months, and the majority of them in what is called "Paper Profits," and these people must make a new start in life, and this particular condition is what creates a continuity and tendency to slow down in business operations. There is plenty of capital if it can be rightfully used. The general commodities of the country have not broken in value, and, as confidence returns, our men will resume activities in commercial life; industries will begin to turn the wheels, etc. We shall gradually, and quite surely, within the first half of 1930 resume, not only a normal, but a very healthy condition in business.

We sometimes think that somewhere in the years of the past, either by Divine direction or otherwise, an overhead scheme for the redistribution of unjust profits and earnings was arranged, and whether this is true or not, this redistribution has taken place within the last two or three months.

The general make-up of the American people is of such a character that they will improve the very first opportunities for employment. This will be made possible when a sufficient amount of confidence has been restored, so that industries will operate, mercantile pursuits will become normal, and banking facilities will respond to improved conditions. Someone in the past has said that "the American people are a willing people and will follow leaders," but under present conditions they will reply about as follows:—"We are willing to follow, but we prefer to know where we are going." At the present moment, through the co-operation of the government and business interests, we believe that in a very short time the leaders will be able to map out the courses and picture the destination.

J. H. Marshall

Northwestern Drug Company, Minneapolis

President, Federal Wholesale Druggists' Association

A survey of the wholesale drug field in the territory covered by the members of the Federal Wholesale Druggists' Association leads to the conclusion that we have much to look forward to during the coming year.

The farmer has been largely favored during the past year, with crops somewhat above the average, and fairly good prices for his products prevail. In view of the fact that the original source of income comes very largely from the ground, in the form of farm products, minerals, or lumber, with the first item very much in the lead, we know that the people composing these communities must have shelter, food, clothing and a fairly good supply of what are looked on as being semi-luxuries. We cannot help but draw the conclusion that the conditions are favorable for a ready outlet for those constituting this fairly long list of needs.

The wholesale drug trade, represented by members of the Federal Wholesale Druggists' Association, reports a larger volume of business in 1929 than 1928, showing a very satisfactory condition, and this in spite of inroads made in the wholesale field by the development of chain stores and the diversion of much business from the wholesaler to the manufacturer, who in shipping to the chains direct, thus eliminating the wholesale distributor, changes the channel of the flow of his products.

We look forward to a steady, normal demand for merchandise somewhat above the average, and should the climatic conditions continue good through the planting and early growing season we believe that our wishes and hopes will be fully realized.

Herbert R. McIlvaine

McIlvaine Brothers, Inc., Philadelphia

President, Philadelphia Drug Exchange

We feel that business will be normal, namely, about the level with 1929, in the crude drug field for those who go out and seek.

Competition, of course, is very keen, and becoming keener every day. It is, therefore, absolutely necessary that each business house is put in order to conform with changing conditions.

Collections have been quite good and probably will improve within the next few weeks.

J. A. Handy

Larkin Company, Buffalo

President, American Manufacturers of Toilet Articles

It is my impression that business conditions are fundamentally sound and that, with the opening of Spring, there will be a conservative increase in general business activity. By that time, President Hoover's constructive program, which is being supplemented by the Chamber of Commerce of the United States and various State and municipal agencies throughout the country, will begin to be felt and go a long way toward re-establishing confidence and general turnover of material, labor, and capital.

I do not believe the drug and chemical industry has been as much affected by the stock market crash and tariff uncertainties as other lines of business. I look for a conservative growth and development in this field with a refinement of quality and more responsibility in merchandising.

George H. Burnett

Joseph Burnett Company, Boston

President, Flavoring Extract Manufacturers' Association

I feel that, with the splendid work that the administration is doing toward equalizing the sharp rises and falls of our business life, although business may be quiet during the first part of 1930 it will improve gradually throughout the year. Low prices of vanilla beans should mean a low level for flavoring extracts for the year, but this condition has not proved particularly healthy, as it has led to many cases of excessive and demoralizing price-cutting. The Flavoring Extract Manufacturers' Association has tried to correct this situation as far as possible by giving all possible publicity to its members about the necessity of accurate cost accounting. The industry is hampered, however, by the large number of manufacturers who do not belong to the association and hence are not in a position to benefit by the information so disseminated.

The association has been trying in every way to increase its membership and has made some progress through the strenuous efforts of Leslie K. Talmadge, chairman of the membership committee.

The co-operative advertising program of the Flavoring Extract Manufacturers' Association has been somewhat of a disappointment owing to the lack of response to the appeal for funds, which has made it necessary to narrow the scope of the work considerably. What further steps will be taken along these lines will be determined at the convention in Washington to be held may 6 to 8.

The convention will, we know, prove interesting to all members of the association, and we hope to have the largest attendance that we have ever had. There will be a minimum of set speeches and those only on specific problems of the flavoring extract industry. A larger amount of time than ever will be devoted to executive sessions which all who have attended previous conventions find to be the most helpful feature of the entire program. In order to derive any benefit from these executive sessions it is necessary to be present at the meeting as the greater part of these discussions are not printed in the minutes.

C. H. Littick

Jackson Medicine Company, Zanesville, Ohio

President, United Medicine Manufacturers of America

I feel very optimistic as to the outlook for the package medicine industry during the coming year. The past twelve months have seen many changes among the agencies engaged in the distribution of drug store products, and I believe that 1930 will see the consummation of the most of these mergers, consolidations, etc., and that the industry will gradually and smoothly become adjusted to the new conditions.

I do not believe that any manufacturer, possessed of a good product and backed by a consistent advertising campaign, has anything to fear. I would warn, however, that constant vigilance is necessary in order to comply with all of the rulings and regulations of the Food, Drug and Insecticide Administration and the Federal Trade Commission, particularly as the activities of these two departments have lately been extended to include censorship over newspaper and all other collateral advertising.

The year 1930 promises to be an excellent one for the package medicine industry. That this feeling is general throughout the industry is evidenced by the increased advertising appropriations of many manufacturers and the fact that very few are announcing any decrease in advertising expenditures.

Philip I. Heuisler

Maryland Glass Corporation, Baltimore

President, Glass Container Association of America

As a whole, the glass container industry can look back to 1929 as a good year. Due to the energetic and well directed nationwide advertising campaign put on by the Glass Container Association the demand for food products packed in glass was largely increased. The visibility afforded by glass as a container for foods of fine quality has a direct appeal to the eye, and has attracted many new purchasers. In other fields, particularly the pharmaceutical and proprietary lines, the demand has also been very large. The milk bottle manufacturers have had a good year. Economy in production has been the aim of every manufacturer, and great progress has been made along these lines. Quality, too, has received considerable attention, and the standard is much higher than ever before.

The widespread use of automatic machinery in processing, capping and filling has necessitated very much closer adherence to fixed dimensions. This imperative demand for closer dimensions had been happily met by close co-operation between manufacturers and users, working in co-operation with the standardization committee of the Glass Container Association.

The Glass Container Laboratories are in constant touch with users and manufacturers, and have done much to help both. The entire facilities of our organization are at the disposal of all connected with the manufacture and use of glass containers, and we hope they will keep in constant touch with us.

We are looking forward to increased growth during 1930.

E. B. Reeser

Barnsdall Corporation, Tulsa, Okla.

President, American Petroleum Institute

Conservation policies adopted a year or more ago are generally conceded to have gone far toward the stabilization of the petroleum industry. Under the co-operative movement through the various fields, at least 10,000,000 barrels of crude oil that otherwise would have been produced were kept in the ground, the natural tankage and the proper place to store petroleum.

More than 10,000 refining companies, marketing companies, and individuals engaged in the distribution of petroleum products have signed the "National Code of Practices for Marketing Refined Petroleum Products." This is tending to correct many of the abuses in the marketing division and will, undoubtedly, assist in putting the selling end of the oil business on an ethical plane. The interest of the public, as well as the industry, will be served better as a result of the code.

The refining department, as indicated by the figures compiled by the Bureau of Mines, has not, as yet, taken advantage of a great opportunity to complete the cycle in the conservation of petroleum products. Leaders realize the wasteful practices of present refinery operations. Stocks of gasoline, for instance, are twice as much as they should be. I look forward to an early correction in this phase of the petroleum industry and believe that 1930 will be a more prosperous year for the entire industry than 1929.

J. C. Johnson

S. T. Johnson Company, Oakland, Cal.

President, American Oil Burner Association

Fuel oil sales this month (January, 1930) will practically double the sales of a year ago. A portion of this increase is the colder weather conditions prevailing. However, the installation of oil heating in so many of the homes of culture during the past year has materially improved this season's sales.

The prospects for good business in 1930 fuel oil sales and oil burner manufacturing and sales were never brighter than they now are, not only for new homes and buildings of all sizes, but in the old buildings undergoing repairs and modernization.

This year modernization starts in the basement. A general cleaning with the installation of automatic oil heating, not only pays big dividends in savings and satisfactory service, but tones up the entire estate making a safe investment for the future.

William Beatty

Barnes-Ames Company, New York

President, New York Produce Exchange

I have the utmost confidence in the present prosperity of our country and the future prosperity also, as in my opinion it is only a question of bridging the present temporary lull in business activities. I think that by early spring we will have practically recovered from the shock of the collapse of stock values which occurred last October and November and which accentuated the usual slackening of building and other business expansion incident to the winter season.

I was not surprised at the recent recession in securities values, although I never expected such an entire collapse, and while the losses sustained by so many are regrettable in the extreme, as the misery and sorrow occasioned is impossible to estimate, yet the experience may not be an unmixed evil as many investors have learned a very severe lesson and in future will try to examine for themselves the merits of their contemplated purchases and not take at random the recommendations of mere acquaintances.

The uninterrupted advance in almost every security, good and bad, was more than the masses could withstand, and sound reasoning was thrown to the winds, and innumerable people bought on margin, many for the first time, and as so many stocks were bought merely for an advance in price and not for their yield, the inevitable crash had to come when values started to decline and the multitude of weak holders could not put up more margin.

The securities sphere of employment became so alluring to the younger men in 1928 and 1929 and the volume of business became so great that many (more than should be) were attracted by the salaries and prospects for a livelihood in this vocation, instead of seeking a more staple employment, and this has resulted in a great deal of unemployment through young men being discharged from securities firms when trading became quiet.

The result of the recent crash is that many, many people have to get back to work again, which will be better for themselves and our country in general.

It is highly unpatriotic, in my opinion, to organize selling pools for bear raids to enrich one's self, which causes untold suffering and misery among innocent and inexperienced investors.

By next summer and the early fall I expect as great a volume of business expansion and new construction work as we have seen in 1929, and, furthermore, there will continue to be many good sound investments where the public can with confidence place their surplus earnings to give them a satisfactory return on their money.

The volume of grain exported to Europe during the past year is very disappointing, and a great deal has been said about the possible causes for this situation. The reason for this is very

(Continued on page 50)

Government in Its Relations With Business

Administrative, Legislative, and Judiciary Functioning, Prosecutions, Investigations, Trade Regulating, Tariff Revising, and Prohibition Experimentation That Occupied the Time of Federal Agencies in 1929

Government Aid in Business Problems

The change in administrations that took place in March of 1929 meant the continuation in large measure of the Coolidge policies, with the extension throughout all branches of the Federal government of that program of interdependence of government and business which marked the eight years that President Herbert Hoover had spent as head of the Department of Commerce.

Finance, transportation, construction, merchandising, agriculture and general business found themselves more dependent on activities in Washington and came to look more to the many government agencies for assistance in working out their problems. The Federal Reserve Board took a hand in attempting to lessen the wild speculation on the stock exchanges and to control the diversion of credit from constructive uses to speculation. The Interstate Commerce Commission completed a plan of railroad consolidation and progressed with its general revision of freight rates. Aviation was assisted through air mail contracts and the navigational facilities extended by the Department of Commerce. The Federal Farm Board was set up with broad powers to organize the hitherto heterogeneous attempts at co-operative marketing of farm products, and thereby a new factor entered the realm of storing and distributing agricultural staples. While the assistance of the Department of Commerce was continued to American firms seeking foreign markets, the domestic distributor received renewed attention, and economists and marketing specialists of the government turned their attention closely to the problems of the small retail merchant and of wholesale distribution. The building industry, at the close of the year, saw itself looked upon as one of the most important wheels of business, with a special government bureau to serve it by the collection of statistics.

By far the most spectacular, and doubtless the most important activity of the Hoover administration in respect to business was the government's dramatic entry into the uncertainty left by the tremendous declines in quoted values on the stock markets in November. The public was stunned, and could think of nothing except other times when sudden stock market crashes presaged a general financial panic and a long period of business paralysis.

Maintenance of Business

First the President called into conference several groups of the most prominent executives in several lines of business endeavor. These men agreed that, statistically, the country's business was sound, that they could see no reason why factories should not keep on running, payrolls be met, railroads keep busy, stores keep open, and business continue as usual—provided no large parts of the business machine stopped completely. These meetings were followed by a call, issued through the agency of the Chamber of Commerce of the United States, for a conference of half a hundred business men, executives of every branch of industry. This conference, called the business survey conference, was unique in the annals of economics. One after another, spokesmen for leading groups of industries, announced that they intended to keep their employees, to add to their factories, and to continue their buying. President Hoover told them in just so many words that, if they would work, they could not only prevent a panic, but they could make prosperity a regular and permanent feature of business instead of a welcome but elusive visitor. And they agreed to go home and keep on working in the belief that everyone else would do the same.

The cure for unemployment, the President said sagely, is to find jobs. So, knowing that jobless men cannot buy goods, the executives decided that additions and betterments to their plants could well be made at this time and that this would employ many hundreds. The Department of Commerce then began to count up the number of construction projects throughout the country, and the total was so large that the prospects for new business soon began to overshadow the stock market crash. Permanent committees created by this conference stood by to serve as a link between government and business for matters pertaining to the continuance of business activity.

President Hoover's belief in conferences, commissions, and committees went with him to the White House. The most notable of his creations in this category was the Commission on Law Enforcement and Law Observance, which, while popularly connected with prohibition only, set out to find remedies for court congestion and the costly delays and omissions in law enforcement.

Antitrust Law Enforcement

One of the most important activities of the government at a time when business news daily was filled with reports of mergers and consolidations was its administration of the antitrust laws. As, for a while, the Department of Justice developed the practice of passing in advance on the legality of business agreements there grew up something of a feeling that the antitrust laws had become a dead letter. The entire business world was therefore electrified by an address of the new Attorney General William D. Mitchell, in which he announced that he would enforce these statutes rigorously. In his speech he said:—

In the first place let me say that the department's program of law enforcement does not make any exception of the anti-trust laws. I have read nothing in the President's inaugural address or in any other of his statements, which makes any distinction in the matter of law enforcement between the antitrust laws and any other acts of Congress, and I have received no intimation from any source that the antitrust laws were to be neglected, or that violations of those laws were not to be prosecuted with vigor and determination. There have been many changes in economic conditions since these statutes were passed, and much discussion has arisen as to whether some modification of them is desired to meet modern business conditions. The antitrust laws are founded on the proposition that avenues of industrial opportunity must be kept open as far as possible to the initiative of the individual citizen. The alternative is bureaucratic regulation. This is not an attractive alternative.

At any rate, until the political philosophy underlying the present antitrust laws has been abandoned by Congress, it will be the duty of the Attorney-General to enforce those laws, and we shall undertake to do this without prejudice and with fairness, but with firmness. The Department of Justice is not the place in which to amend the antitrust laws or any other acts of Congress. Changes in business conditions and methods of marketing, vortical trusts, chain stores, and other modern developments have come thick and fast and have been somewhat confusing to those dealing with the antitrust laws, but I have no doubt that the principles contained in these statutes will be intelligently applied by the courts to the modern conditions. Our material prosperity has been so overwhelming, our business institutions have been increasing in size and number with such leaps and bounds that I fear there has been a disposition here and there to go too far and transgress the law. The machinery of some trade associations seems to have been made use of for transactions that come dangerously near price-fixing. With every disposition to refrain from any interference with legitimate business, the antitrust division of the Department of Justice proposes to deal vigorously with every violation of the antitrust laws which comes to its attention.

One other aspect of this subject should be mentioned. It was the practice of the department in the last administration to consider proposed mergers or other business transactions presented to it by those interested, and to indicate in a limited way its views as to the legality of the proposals. The letters which the department wrote in such cases were carefully guarded in their terms. The form used has usually been as follows:—

"As the facts in this matter are understood by the department, they present no occasion for the institution of proceedings under the Federal antitrust laws at the present time. Inasmuch, however, as the transaction may at some future time become the subject of court proceedings under the Federal antitrust laws, the department expresses no opinion as to its legality."

Attitude Toward Mergers

Carefully guarded as this language was, the attitude of the department has often been misrepresented and misconstrued. The Attorney-General has no power to license anyone to violate any statute. His determination that a transaction does not violate the statute may lawfully be reversed by himself or by any successor. Notwithstanding these limitations, those who submit such proposals and receive such a letter get some comfort out of the prospect that no immediate prosecution will follow the consummation of their plans. We have found as a result of experience that such proposals often have some practical elements that are not fully developed when the proposals are submitted, and that the plans as carried out have not operated just as was contemplated, and the transactions as outlined to the department in advance, seemingly innocuous have in practice worked in apparent violation of the antitrust laws. While the department, in the effort to co-operate with legitimate business, is receiving and will continue to receive those who want to submit their proposed transactions for our consideration the attitude of the department towards these inquiries is substantially as follows:—

First—If the proposal seems to involve a violation of law, we will so state to those interested.

Second—If the proposal, while not clearly involving a law violation, comes so close to the line that we feel it would be necessary to invoke the judgment of the courts in case the proposal is executed, we so advise those interested.

Third—If the proposal does not appear to involve a violation of law, but the matter is complicated and involves an intricate inquiry into the facts, which we have not the facilities to make in advance, or if there is room for any doubt or difference of opinion as to the validity of the proposed transaction, we shall decline to express any opinion about it or to give any intimation that the department will refrain from legal proceedings, and reserve full liberty of action. Only in the clearest case will letters of advice be issued to the effect that no legal proceedings are likely to be instituted.

It may be that these methods will not afford much comfort to those who present the proposals, but at least they will know it if the department contemplates immediate steps to restrain their activities, and if the department declines to express any opinion or commit itself in any way those interested know that if their transaction proceeds they must act on their own responsibility, with full liberty of action to the department to proceed as future developments may require.

Census Plans

Groundwork was laid during 1929 for taking the 1930 decennial census of population and the biennial census of manufactures and also a new tabulation effort, a census of distribution. This latter project had long been advocated by economists and business men, and when the Department of Commerce found itself faced with the requirement of taking such a census, it followed the usual custom and called for the assistance of business. Several advisory committees were formed, and they put in much study on the census problems, so that, as the year ended the machinery was completed for the greatest enumeration ever attempted in this country. One of the minor census matters of the year was the discontinuance of the semiannual census of paint production, due to lack of co-operation in the trade, and later the substitution of a monthly census of the volume of paint sales.

Simplification and standardization work continued in 1929, one of the principal projects being the standardization of fuel oil grades and of the methods of retailing lubricants. The Bureau of Standards, which conducts this work, continued its research into useful sciences, one of its discoveries being a measuring system for natural gasoline in crude oil and natural gas. The Bureau of Mines continued experiments to reduce the cost of producing petroleum, helium, potash, and other mineral resources.

Tariff Revising Covered the Year

A full year of hearings, debate, and general uncertainty over revision of the tariff act was the outstanding governmental activity affecting business in 1929. For twelve months, a tariff revision bill was before one of the two houses of Congress with requests for changes in almost every rate in the act and no certainty at any time as to the final status of any provision.

Persuant to his election promises, President Hoover called Congress into special session in April to consider "limited tariff revision" along with farm relief legislation, but he failed to stipulate what these limits should be, and the fact was rediscovered, as it is at each rewriting of the tariff act, that once the subject is opened for change there is pressure for revision in every section. In the seven years the act of 1922 has been in effect, there have been many economic changes which were held to call for a new tariff set-up, and before the proceedings had progressed far it became patent that every rate would be given scrutiny. While sugar, wool, and similar traditional subjects of tariff controversy received their usual amount of debate, chemicals, oils, and related products were among the most discussed items in the entire act.

Anticipating the President's call, the House of Representatives began hearings three months in advance, and January 7, its ways and means committee began hearing importers and manufacturers on the first, or chemical, schedule. An enormous number of witnesses were heard on this schedule, and requests were made for increasing, reducing, or maintaining the rate on almost every chemical named in the act.

Demands of Agriculture

The tariff revision was proposed primarily in the interest of agriculture, and farm organizations at once came forward with lengthy proposals for rate increases. Prominent among their arguments was that of substitution, that is that imports should be reduced on all commodities for which domestic farm products might be substituted. It was seriously argued that bananas should bear such a high tariff that fruit eaters would prefer apples and this idea was carried through a whole range of commodities and found its chief battleground in the field of oils and fats.

Supported by some fish oil and other interests, the various farm groups united behind a proposal to place a duty of 45 percent ad volorem on all foreign animal and vegetable oils and fats, with only a slightly less duty on oil bearing materials. Since Philippine coconut oil and copra form the bulk of vegetable oil imports, it was proposed that the full duty be levied on all Philippine products, which are now duty free; or, as an alternative, that the importation of coconut oil from the Philippines be limited to a certain quota each year. The theory was advanced and warmly defended that practically all animal and vegetable oils are interchangeable in use and that every importation of a foreign oil takes away a market for an oil which could be grown in the United States.

Consumers and importers of vegetable oils rallied to attack this contention, and they submitted many arguments to show that every kind of oil is not interchangeable with other oils for many purposes, and that while this country produces a surplus of lard and other edible oils it is deficient in the production of drying oils and particularly soap oils, which need to be supplemented by importations of tropical oils. Soap manufacturers proposed that, regardless of the duties on edible oils, they be permitted to bring in soap fats duty free when properly denatured.

Advocates and opponents of Philippine independence took a hand in the controversy because of the copra and coconut oil situation, and this highly controversal political question was interjected into the tariff debates. The farm interests fought for their vegetable oils proposal before the house committee, in the house itself, and before the senate committee without being able to convince majorities that their position was sound, but they prepared to make still another fight on the floor of the senate where the bill was under consideration at the close of the year. Some consideration was given the oils group, however, particularly linseed oil and flaxseed, which were given increased rates.

Blackstrap Controversy

Another examples of the principle of substitution which created a series of bitter fights but in which the farm interests lost throughout the year was the case of blackstrap molasses. In the belief that alcohol producers would turn to the use of low-grade corn as raw material, it was proposed to place a duty on blackstrap molasses so high as to make it unprofitable to import it for distilling purposes. Of more direct bearing were many other requests for increased duties insisted upon by farm organizations, such as the request for the high duty on casein, tropical starches, and corn chemicals.

On chemicals proper, domestic manufacturers had pretty much their own way at the hearings. For the most part they advocated the continuance of the present protective duties, but in a number of cases increased rates were declared necessary. Reports of the formation of cartels in the European chemical industry were frequently cited as arguments for raising the tariff wall against foreign chemical

products. A large number of decreases were requested by consumers and importers, but domestic manufacturers predominated at the hearings before the house committee, and their arguments apparently were better received by the majority of this group. Among the more important commodities for which substantial increased duties were asked were nitric acid, citric acid, vanadium chemicals, stearic acid, noncoaltar synthetics of the aliphatic or open-chain series, butyl alcohol and acetate, pyroxylin products, botanical drugs, wool grease, naval stores, potash and phosphate salts, and a large number of other chemicals of varied nature.

The paragraphs of the present act providing high duties on coaltar dyes and other products were attacked, particularly the basing of these duties on the American selling price, but American producers vigorously defended these provisions and suggested further strengthening of them. Two mineral products which caused lengthy arguments between importers and producers were gypsum and manganese, while the plate and window glass rates also received much attention. A proposal was made that chemical fertilizer mixtures be dutiable, while raw materials be free, but this was opposed by farm interests. Domestic fisheries asked a duty on codliver oil to develop the industry here, a proposal which met vigorous opposition from the many importers, and an exactly parallel situation occurred during the consideration of the olive oil duty, although this latter question was greatly complicated by disagreements between importers of packaged oils and packers of bulk oils in this country. A brief attempt was made to secure a duty on petroleum, but the Midcontinent producers and the coal interests who advocated this were greatly outnumbered by consumers and importers.

Few Changes Proposed

The ways and means committee reported the tariff revision bill to the house on May 7, and it was passed three weeks later. Relatively few changes in the rates of duty on chemicals and allied products were made, although 75 percent of the forty changes in schedule one were increases. Agricultural interests were unsuccessful in most of their demands regarding this schedule; although increased rates were given some edible oils. Recognition was given new developments in chemistry, particularly in the solvents, lacquers, alcohol, pyroxylin, synthetic resin, and fermentation industries, as well as the newer acids, and entirely new wording was provided for cellulose products and aliphatic synthetic organics. Most of the many duty changes proclaimed by the President under the flexible provisions of the law since 1922 were incorporated in the bill.

The tariff revision bill went to the senate the end of May, but in this body the proceedings were far less expeditious than they had been in the house. At the hearings before the finance committee, appeared many of the same witnesses who had testified before the house committee, and many arguments were repeated. Those who did not get what they wanted from the lower chamber, came to try again; while those who stood to lose by rate changes proposed by the house, came to seek restoration of the old rates by the senate. The hearings dragged along through the Summer with much controversy but little new in the way of facts. Perfume bottles and artists' colors stood out in the mass of commodities discussed as subjects of particularly sharp debate between opposing witnesses.

Two features of the senate committee hearings were a number of protests against proposed increased duties submitted by various foreign nations, and the attempt of the committee to estimate manufacturers' profits through examination of confidential income tax returns.

The majority party members of the finance committee announced their proposed changes in rates August 20, which embodied a number of reductions in rates, but in general these were on unimportant products, or on commodities which are not produced in this country or on which there is no duty at present and for which a weak case was made in support of the house rates.

Senate Prolongs Debate

The senate began debate on the tariff bill under a rule which restricted it to items on which the finance committee proposed changes, the bill to be gone over a second time for amendments from the floor. In spite of this restriction, the senate rules permitted almost unlimited debate on the subjects that were before the chamber, and also allowed the interjection of other topics from time to time, so that the tariff bill was before the senate almost continuously until the close of the year without final action on any rates. The chemical schedule being the first in the bill, it was made the target for a series of attacks by low-tariff Democrats and insurgent Republicans from Western States, with the result that American chemical manufacturers were subjected to sharp criticism for their demand for high rates, and many of the chemical rates were beaten down by the coalition of these two groups.

Many changes were made by the senate in the administrative provisions of the tariff law. Among the most important of these was the removal of the power of the President to proclaim duty changes after findings by the Tariff Commission and the return of this power to Congress. The Tariff Commission was directed to make a conversion table showing the equivalent rates of the new act if based on domestic instead of foreign value, while the President was directed to study the feasibility of using some form of domestic valuation instead of the traditional foreign value as the basis for ad valorem rates.

All of the amendments made by the senate were subject to later change by that body, and then the entire bill would be passed into conference to adjust the differences with the house. In addition to the many administrative and rate changes expected to delay the bill in the conference, the senate added the agricultural export debenture plan which it was unable to get incorporated into the farm relief bill. The year ended with the senate still plodding through committee amendments and debating each one at length, and with no assurance as to the final decision on any paragraph in the act.

Although devoting most of its energy to assisting the house and senate committees in considering the tariff revision bill, the Tariff Commssion found time during the early part of the year to conduct some investigations with the view of reporting to the President for the purpose of duty changes under the flexible provisions of the law. Important hearings were those on the applications for 50-percent increases in the duties on barium chloride and on sodium phosphate.

Increased rates were proclaimed by the President under section 315 of the act on peanuts, flaxseed, plate glass and window glass.

Congress Achieved But Little

Congress was in almost continual session during 1929, but as most of the time was occupied by a special session limited to certain definite topics, the record of completed legislation is comparatively short.

The two final months of the seventieth Congress and of the Coolidge administration saw the enactment of only a few measures of national importance. Among these were the Jones-Stalker bill increasing the penalties for violation of the prohibition act, ratification of the Kellogg-Briand pact outlawing war, and the authorization of fifteen navy cruisers.

In taking office, March 4, President Herbert Hoover delivered a vigorous inaugural outlining a number of legislative projects, and in compliance with election promises he called the new Congress into special session April 15. He asked it to limit itself to a number of topics, principally farm relief and limited tariff revision. In ten days the house passed the agricultural marketing act and a month later it sent to the senate a tariff-revision bill, groundwork for both having been laid before the opening of the special session. While the senate wrestled with the tariff bill the remainder of the year the farm bill was enacted about the middle of June, but not until after a bitter fight over the export debenture proposal, in which the house, standing behind the President's desires, forced the senate to omit this feature from the bill.

A board was immediately appointed to carry out this farm act, and steps were taken at once to organize strong central co-operative associations for the marketing of principal farm commodities, financed in large measure by loans from the Federal government. An attempt was made to have naval stores considered as agricultural products so that the producers of these commodities might form the strong cooperative marketing organization permitted by the act, but the board was of the opinion that the act could not be so interpreted.

Other matters disposed of at the special session were bills authorizing the 1930 census of population and distribution, including automatic reapportionment of the house; an appropriation to fight the Mediterranean fruit fly, suddenly discovered in the Florida citrus groves; a measure to permit the Treasury Department to issue short-term, non-interest-bearing securities on a discount basis, and appropriations for aiding farmers in Southern flood areas.

The senate, toward the end of the year, occupied itself with investigations of lobbying activities, naval limitation propaganda, profits of corporations seeking tariff increases, qualifications of Senator elect William S. Vare, of Pennsylvania, and alleged manipulative and speculative transactions on the cotton futures exchanges. Investigation was also proposed of speculation and practices in the stock exchanges and of the relations of the Federal Reserve Board to stock speculation.

When the regular session of Congress opened, in December, President Hoover laid before it a large number of national problems calling for legislation, particularly advocating increased expenditures for waterways, buildings and other public works, the strengthening of law enforcement and tax reduction. Acting on executive recommendation Congress speedily passed a resolution reducing by one percent both corporation and normal personal rates on income taxes for the 1929 calendar year.

Cartels and Combines Studied

Extension of the cartel idea to a large number of European industries, active entry of the German dye trust into the United States, and continued unsettled conditions in foreign oil-producing countries were the features of the foreign commercial relations of the United States in 1929.

The German dye trust, or I. G. Farbenindustrie, premier among national cartels and leader of the European chemical industry, showed increased profits, although not expanding quite so rapidly as in earlier years. Foreign chemical reviews made by the United State Department of Commerce showed the British chemical industry expanding throughout the Empire, with conditions favorable for further growth, French chemical plants increasing their output, and Swiss chemical exports doubled. The Franco-German dye cartel was joined by the Swiss, while the German I. G. formed a strong holding company in Switzerland. The British consolidation of chemical industries, Imperial Chemical Industries (I. C. I.), strengthened its position in the British colonies and dominions and secured holdings in South America.

Cartels, mergers and monopolies featured reports of lesser foreign industries as well. A cork combination was reported from Spain; a glass merger from Belgium; a sumac cartel from Italy, and a mineral color trust from Germany. Japan and Spain made the narcotic drug business government monopolies. The Norwegian government tightened its control of codliver oil. The Italian government fostered the renewal of the Sicilian sulphur combine and a price raise by the calcium citrate trust. A potato starch trust was organized in Czechoslovakia. Mergers continued in the Belgian chemical and drug industries. German, French and Belgian potash producers closened their co-operation, as did the saltcake marketers of these three nations. A permanent international central committee of the benzene producers of eight European countries established offices in Paris. A huge merger of British and Belgian margarin, soap and vegetable oil interests was announced.

The outstanding event of world fertilizer developments was the formation of a working agreement between Chilean producers of natural nitrate of soda and British and German synthetic nitrate industries. This was accomplished by a trip of Pablo Ramirez, Chilean minister of finance, to the United States and Europe in the Spring. With Chilean operations more active and the producers' association reorganized and continued on a more substantial basis, the South American republic joined with the world's principal synthecizers of nitrates to increase the agricultural use of their product and to allocate the export trade of the world.

American I. G. Formed

The German I. G., which had been increasing its American interests for several years, startled the chemical and financial world in April with the formation of the American I. G. Chemical Corporation, a subsidiary holding company, in New York. Although backed by the German parent company, this corporation was advertised as a strictly American concern, organized to enter into all branches of chemical manufacturing, but immediately to control the General Dyestuffs Corporation, the General Aniline Works and the Agfa-Ansco Corporation. Its organizers included leading American financiers and industrialists, among them, Walter Teagle, president of the Standard Oil Company of New Jersey.

This Standard Oil company, which for some time had had a working agreement with the German I. G. regarding patents and process for the hydrogenation of petroleum and the production of gasoline from coal, in December announced a reciprocal oil and dye agreement and the formation of the Standard-I. G. Company to handle patents and the development of the joint project.

Oil Rules Troublesome

The oil industry continued to have its troubles with foreign governments during 1929. Mexico continued its policy of putting so many obstacles in the way of foreign corporations producing oil in the country that one by one they closed their operations and ceased producing, as the huge supplies of cheaper oil from other fields made profits impossible. Nevertheless, the demand for nationalization of petroleum resources or other forms of close governmental control of the oil industry continued in many Latin American countries. In Argentina an administration plan lay before the congress without action, while exploration work was hindered by the possibility of nationalization.

Colombia, seeking some solution of the tangle of government demands and oil company claims which has characterized the petroleum industry there for many months, secured the services of experts from the United States, England, Mexico, and Roumania. Each of these men made a separate report to the Colombian givernment regarding the merits of nationalization and other suggestions for putting the oil business on a stable and satisfactory basis, but the reports did not bear fruit in government action by the close of the year. Meanwhile American and European oil interests found a basis of closer co-operation, and a number of oil executives from this country held a conference abroad, ostensibly to eliminate friction between the various interests and to attempt to curb world overproduction. Settlement progressed with American oil companies whose operations in Spain were closed by the creation of a petroleum monopoly there.

Dutch Shell in U. S.

In this country a settlement was reached in the long-standing controversy between the government and subsidiaries of the Royal Dutch Shell Oil Company over leases on the public domain. The action of Holland in granting the Standard Oil Company of New Jersey, though a Dutch subsidiary, a concession in the Netherlands East Indies made Holland a reciprocating country under the terms of the leasing act of 1920, and the Shell Oil Company thereupon applied for approval of the assignment of a lease on government oil lands. The Department of the Interior at first disapproved on the ground that the Dutch Shell was really an English company, and for a while diplomatic unpleasantness threatened, but the Netherlands origin of the company was finally shown and the assignment approved.

Two Pan-American trade treaties were drawn in 1929 for the purpose of promoting commerce and good-will among the American republics. One dealt with the protection of trademarks, while the other was to simplify customs procedure. During the year the senate ratified a treaty with a number of European nations for the abolition of import and export restrictions, except ordinary tariffs. The anti-trust suit against the American operations of the Franco-German potash monopoly, which had been pending for a long time, ended in a consent decree soon after similar action respecting the quinine monopoly suit the preceding year.

Trade Commission's Activities Many

The work of the Federal Trade Commission in 1929 was again marked by the increasing number of trade practice conferences and by investigations into the activities of large industries. The usual number of cases against individual concerns were prosecuted, and the commission entered on a new line of activity, the supervision of advertising statements in periodicals.

Outstanding investigations were those of financial structure and publicity enterprises of the power and gas public utilities, the investigation of the newsprint paper industry and its financial relationships with newspapers, and continued study of chain stores, resale price maintenance, open price associations, price bases, and blue sky securities.

The trade practice conference has become so popular that no well-organized trade association is complete without one, and the commission has had to enlarge its facilities for this method of assisting business to draw up codes of ethics. The trade practice conference was inaugurated in 1919, but only two or three were held each year until about two years ago, when the yearly average was sixteen.

In 1929, forty-four trade practice conferences were held by the commission. Among these were the fertilizer industry, held in Washington, January 27; the gypsum industry, held in New York, March 28; the petroleum industry, held in St. Louis, February 11; the spice grinders' industry, held in New York, May 29; the naval stores industry, held in Washington, June 11; the lime industry, held in Washington,

June 27, and the medical gas industry, held in Indianapolis, November 25. In addition, conferences were authorized with the bleached shellac industry and the solvents industry.

The petroleum conference was one of the most important held by the commission, and approval was given to a long code of marketing practices drawn up by the American Petroleum Institute. The rules dealt mainly with relations with filling station operators and other marketing problems, and were designed to free the industry of the many petty but serious methods of unfair competition. This marketing code was severely attacked by some consumers and independent producers, and there were indications that its legality and practicability would be put to a severe test.

During the year the commission published a compilation of all the business codes adopted at these conferences and these rules were usually made the basis for those adopted by other industries, and in general the other conferences held during the year adopted rules of the same nature as those which the commission had approved at other times. Resolutions against misbranding, misrepresentation, slack-filled packages, selling below cost, secret rebates, and defamation of competitors predominated at these conferences.

Supervision of Advertising

A special board of investigation, composed of three of the commission's attorneys, was created by the commission in May, 1929, to handle false and misleading advertising published in newspapers and periodicals. This board acts before the issuance of complaints, and, therefore, in secret, and attempts to bring about a correction of objectionable advertising through informal conferences and correspondence, and without the expense, delay, and publicity of a formal complaint and order. Publishers and advertising agencies are often included with the advertisers as respondents in these proceedings, and by this method, they are given opportunity to stipulate to abide by the decision of the commission without becoming the subject of formal action by the commission.

The board has disposed of a large number of complaints in this manner by securing changes in advertising copy without litigation. This method has been used particularly with advertisements for cosmetics, proprietary medicines, obesity cures, and various sorts of so-called "health foods," appliances, and courses, and in this matter the commission has worked closely with the Food, Drug and Insecticide Administration of the Department of Agriculture.

The economic division issued a report on open price trade associations and a partial report on its investigation of resale price maintenance, and continued work on this latter subject and on its investigation of chain stores and a number of other economic questions. At the close of the year the senate directed the commission to investigate price conditions in the cottonseed and peanut crushing industries.

Action against price-maintenance schemes, particularly in the drug and cosmetic industry, was continued by the commission. Among the complaints of this nature issued were those against Coty, Inc., dealing with perfumery; the Maryland Pharmaceutical Company, maker of "Rem" cough remedy, and the Rex Company, covering insecticides. Johnson & Johnson, manufacturer of surgical dressings, after lengthy hearings, was ordered to stop its attempts to maintain prices on toilet and baby powder, while hearings continued in the investigation of the price-maintenance system of the Armand Company, face powder manufacturer.

Commercial Bribery

Paint and varnish dealers were given considerable attention by the commission during the year. A number of complaints and stipulations were issued against misbranding and deceptive labeling of paints and the representation of jobbers as being manufacturers. A number of paint cases were taken to court by the commission, notably a commercial bribery case against the Grand Rapids Varnish Company. This ended in a consent decree but demonstrated the commission's authority to proceed against commercial bribery. Louis Leavitt, New York, was found guilty of criminal contempt for disregard of the commission's order regarding the labeling of white lead, and the commission asked the court for enforcement of its order against L. F. Cassoff, Brooklyn, involving the mislabeling of shellac.

Two important orders were issued against soap manufacturers in 1929, one of them to prevent James S. Kirk & Co. from using the word "castile" on soap not made exclusively from olive oil. This order followed a long series of hearings at which appeared representatives of the leading soap manufacturers of the country, as it involves practices very common to the soap trade. The company declined to accept the commission's decision as final, and court proceedings were instituted to test the question. The use of the words, "toilet," and "bath" to describe soap composed of ingredients unsuitable for toilet or bath use was banned in an order issued to the Hoosier Manufacturing Company and others. The commission secured from the Federal courts an order sustaining its requirement that James J. Bradley refrain from the use of the words, "English tub soap," on soap made in the United States.

The usual number of miscellaneous cases involving unfair methods of competition was handled by the commission in 1929, particular attention being given to misrepresentation as an importer or as imported merchandise, simulation of the trade names of competitors, the representation of the regular selling price as a special offer, and false curative claims. In the latter class, one of the most interesting cases involved an obesity cure known as "Marmola Prescription Tablets." This product met all requirements of the food and drugs act, but it contained thyroid extract which, while it might reduce the flesh, was claimed by the commission to be extremely dangerous to take without the observation of a gland specialist. After a heated controversy, the commission ordered the company to cease representing the product as a safe and scientific preparation.

Baking Powder Problems

The long-continued controversy between the commission and the baking powder industry was carried on during 1929. The commission ordered the Calumet Baking Powder Company to cease its so-called "water glass" demonstration of the frothing quality of its powder and not to intimate that this test indicated the action of baking powder in dough. The Royal Baking Powder Company dragged through the courts the entire year two actions which would prevent the commission from proceeding with the cases against it. One of these was to restrain the commission from reopening for further evidence a case previously dismissed regarding alleged defamation of competitors' goods. The Supreme Court of the United States finally overruled this motion. The other involved the alleged prejudice of one of the commissioners whom the company sought to remove from consideration of the case prior to the taking of any testimony by an examiner. After losing in the lower court the company appealed but later moved to dismiss the action, so that with the close of the year the commission was free to proceed with actual consideration of these cases, one of which has been pending since 1926.

As 1929 was a year of unprecedented mergers among business firms of all descriptions, the commission was kept busy with its duties under the Clayton antitrust act. Nearly 300 investigations of stock acquisitions were instituted during the year. The commission decided in at least two-thirds of these cases that there was no violation of the act, mainly because of acquisition of assets, lack of competition between the merged companies, lack of jurisdiction of the commission, or lack of competition between the products. The commission found that most of the mergers were so consummated as to avoid violation of the Clayton act and less than half a dozen of the inquiries were listed as possible violations.

During the year the commission completed taking testimony in its Clayton act complaint against V. Vivaudou, Inc., for acquisition of stock of the Alfred H. Smith Company and Parfumerie Melba, Inc.; dismissed a complaint against the Pennsylvania Salt Manufacturing Company for acquisition of the Michigan Electrochemical Company, and issued a complaint against the California Ink Company for acquisition of the George Russell Reed Company. Toward the close of the year the commission issued a complaint under the Clayton act against McKesson & Robbins, Inc., a merger of half a hundred wholesale druggists. This case promises interesting developments in the interpretation of the Clayton act.

Distribution Problems and Price Plans

The economic problems of the retail merchant and of the distribution of goods to the consumer received an unusual amount of attention from various branches of the Federal government in 1929.

While the Federal Trade Commission conducted so-called "economic," as distinguished from punitive, investigations of chain-store methods of donig business and of resale price-maintenance schemes, the Department of Commerce, which for years has studied exporting problems, turned to the home market and began a series of studies designed to improve the merchandising of all classes of goods. With Congress in regular session but a few months of 1929, nothing was done to advance the legislative status of the Capper-Kelly bill, pending since 1911, which would modify the antitrust laws so as to permit manufacturers of trademarked, competitive goods to contract with dealers as to minimum resale prices.

Meanwhile the Federal Trade Commission, in January, issued the first part of the report of the investigation into resale price maintenance which it had had under way for more than a year. This report covered only part of the field of inquiry, mainly the legal status of price maintenance and the general experience and opinions of interested business classes and of consumers. The commission continued, but did not complete, work on the second part of the report which covered statistics of actual business experience in handling trademarked or otherwise identified products, and upon the relationship of resale price maintenance to different types of products and methods of distribution.

Price-Maintenance Opinion

No conclusions or recommendations were made in the partial report, which was mainly a rather lengthy discussion and statistical analysis of the opinions toward price maintenance of various classes of manufacturers, distributors and consumers, as revealed by questionnaires. The report did not contain much ammunition which could be used either by advocates or by opponents of resale price-maintenance legislation. The replies showed that consumers, on the whole, are against resale price maintenance by a large majority, and the professional classes are against it by a smaller majority. Retailers, on the other hand, are for it by a large majority, although chain and department stores are decisively opposed. Manufacturers, particularly those making widely advertised trademarked goods, are decisively for it, and wholesalers are more strongly for it than other groups. On the whole, public opinion was shown to be quite evenly divided on the subject. The report, however, contained much data of value for any study of these topics.

The more significant of the commission's observations on price maintenance were as follows:—

Under resale price maintenance the margin allowed to the retailer would still be a competitive matter to a large extent, but a matter of competition, obviously, among manufacturers and not among dealers. Thus the dealer price competition would be largely eliminated; that is, the dealers would have nothing to say regarding the margin taken for handling price-maintained goods, but would act in this matter substantially as agents of the manufacturer. In such a position, it is alleged, they should be protected, eventually, especially through the right of reutrning unsold stocks at purchase cost and in the matter of equal treatment of dealers as to margins.

The fixing of resale prices by an individual manufacturer does not amount to concerted and general price fixing by manufacturers, though this is feared by some, but it necessarily restricts the scope of dealer competition. It is claimed, therefore, that the interest of the consuming public would also need some safeguard with respect to such prices. This general point of view finds frequent expression in answers to the questionnaires discussed in this report.

The subject of resale price maintenance can be viewed in its true light only as a part of a much larger situation; that is, in relation to efficiency and economy in the whole scheme of distribution. The cost of distribution—the margin between producer and consumer—is at present alleged to be unduly wide, espcially on staple articles. This proposition is not exact or even quantitative in its terms, and cannot be made as a positive and definite statement without extensive analysis of the concrete facts in stastistical form. Without waiting for that, however, the question is raised by some whether encouragement should be given to any tendency to increaes the margin in question. It is contended by those opposed to the plan that resale price maintenance, not subject to authoritative control by govermental or other impartial agency, might easily cause a widening of trade margins, which are alleged to be often too wide already.

A series of questionnaires was sent out during the year in the investigation of chain-store methods of merchandising being made under a senate resolution. As this investigation required comparison of the advantages and disadvantages of chain-store and other methods, the actual savings and relative efficiency of the chain-store system, application of the antitrust laws to chain stores, and their tendency to monopolize control of distribution, the commission found itself faced with a tremendous task. After considerable experimental field work, lengthy questionnaires were sent to chain stores, old-line wholesalers, and independent retailers, designed to secure data on the details of the financial operation of the businesses, and general information as to the character of the business and method of conducting it, results of pool and co-operative buying, and actual competitive conditions. Large numbers of returns were received, but a report on the study was not in sight by the close of the year.

Distribution Confusion

The interest of the Bureau of Foreign and Domestic Commerce in merchandising changes and problems is indicated by its 1929 report, where it was said:—

There has perhaps never been a time when business was more confused with regard to the future of existing marketing and distribution methods. The growth of the chain-store movement, the large number of mergers (often involving old, established distributing houses), the pressure of mass production for new outlets, the deevlopment of hand-to-mouth buying and of installment selling are only a few of the indications that deep-seated changes are taking place.

Under these conditions business must have some constructive assistance. The bureau's experience in the past has been that manufacturers and distributors welcome help from the government in solving these difficult problems.

The whole field of market research is relatively new; much pioneering must still be done. For working out certain phases of the study there must be some agency in which the business public has entire confidence and which, because it has nothing to sell, presents its findings in a wholly unbiased manner. The bureau's activities of the past year have demonstrated that it can perform this function satisfactorily and at the same time supplement and reinforce what is being done by private organizations.

Features of domestic commerce work of this bureau were surveys of the commercial and marketing conditions of various regions and a market data handbook covering all counties of the United States; cost of distribution studies, of which the outstanding example was the grocery industry in Louisville, Ky.; a series of industrial market studies; and the inauguration of a national retail credit study. Distribution methods in the paint and varnish industry were made the subject of an extended survey with a view of reducing marketing costs and revising sales methods. Proposals for a typical survey of the distribution of drug commodities in St. Louis were made, and plans were laid for a study of petroleum marketing in the Gulf Southwest region.

Paralleling and supplementing these government researches in merchandising were those of a number of trade organizations, notably the Chamber of Commerce of the United States. In April this body sponsored a wholesale distribution conference at which a number of committees brought in scholarly and practical studies of the economic functions of wholesaling and ways of improving wholesale methods. Another conference of business men, this sponsored by the United States Department of Commerce, considered problems of industrial advertising and selling.

Trades Plan Co-operation

Another evidence of the aroused interest of the business world in the changing methods of distribution and the economic function of the merchant was the number of plans announced by wholesalers in many fields, but particularly in the drug business, for meeting chain-store competition and adapting the independent merchant to the modern business world. Notable among these may be mentioned the McKesson & Robbins plan of a chain of wholesale druggists, the E. R. Squibb & Sons plan for co-operative profit-sharing participation of retail druggists in its business, and the Ellis-Roosa plan of wholesale drug mutualization.

During the latter part of the year committees of business men were called upon by the Department of Commerce to assist in laying the groundwork for one of the largest merchandising studies ever attempted, the census of distribution to be taken early in 1930.

Federal Oil Lease Investigations

Closing chapters were written during 1929 to the long story of investigation and litigation growing out of the oil leasing scandals of the Harding administration. The year opened with much ado about contracts for the sale of royalty oil from the Salt Creek, Wyo., oil fields, which had been made between Albert Fall, Secretary of the Interior under President Harding, and Harry F. Sinclair and renewed in 1928, only to be declared invalid by the Attorney-General. A senate investigating committee talked of censuring the Department of the Interior for renewing the contract and also probed into the Salt Creek leases themselves in the belief that further fraud and irregularities might be uncovered. At the close of the congressional session March 4 the committee turned over the investigation to the Department of Justice, but retained its own authority to reopen the matter when deemed advisable. Nothing more was done on the matter during the year, however.

Two sentences imposed on Harry F. Sinclair by the criminal court of the District of Columbia were upheld by the Supreme Court of the United States. The first was a sentence of three months, accompanied by a fine

of $500, imposed for contempt of the United States Senate March 22, 1924, at Mr. Sinclair's sixth appearance before the senate committee investigating his lease of lands in the Teapot Dome naval oil reserve in Wyoming. Mr. Sinclair had refused to answer certain questions on the ground that these related to private matters only and that since the same matter was involved in a criminal proceeding against him, he must reserve his testimony for the court. The supreme court held that the questions of the committee were within its powers of investigation as a basis for legislation. Mr. Sinclair's attorneys made an unsuccessful attempt to secure a reconsideration.

Jury Shadowing Penalized

The second conviction, carrying a sentence of six months, was for contempt of court in hiring private detectives to shadow the jury which was trying Mr. Sinclair on the crarge of conspiracy to defraud the government in connection with the Teapot Dome leases. The oil man's attorneys contended that there was no contempt, since the detectives made no attempt to influence members of the jury, but simply watched them to see that no one else approached them, and they cited instances where government detectives had shadowed juries under similar conditions. In upholding the sentence, the supreme court also upheld a sentence of four months in jail for Henry Mason Day, Mr. Sinclair's business associate, and a fine of $1,000 for W. Sherman Burns, head of the William J. Burns International Detective Agency, who supervised the shadowing operations.

Mr. Sinclair entered the District of Columbia jail May 6 and, as the sentences ran concurrently in part, he was released November 21. An attempt to secure a pardon for him failed. On his release he issued a lengthy statement defending his own course of action and declaring that he had been singled out for unwarranted punishment under hostile influences, political prejudice, and misunderstanding.

October 7 the Supreme Court of the District of Columbia opened the trial of Albert B. Fall on charges of receiving a bribe of $100,000 from Edward L. Doheny just prior to a lease on the Elk Hills, Cal., naval oil reserve, granted by the Department of the Interior to the Pan-American Petroleum & Transport Company, a Doheny concern. The trial had been postponed many times due to Mr. Fall's illness, and his poor physical condition almost caused a mistrial. The defense was that the $100,000 was simply a personal loan from an old friend and had nothing to do with the departmental lease. A jury convicted him of having been influenced by Mr. Doheny, and he was sentenced to pay a fine of $100,000 and to serve one year in jail. His attorneys at once planned an appeal, while the government prepared to try E. L. Doheny on charges of giving a bribe.

An echo of the earlier attempts to try Fall and Sinclair for conspiracy in the Teapot Dome leases was the action of the District of Columbia Supreme Court in September in assessing a fine of $60,000 against Harry M. Blackmer, formerly president of the Mid-West Refining Company, a Sinclair concern. Mr. Blackmer fled the country in 1923 to avoid a subpena requiring him to testify, and while he has renounced his American citizenship the court seized $100,000 in liberty bonds belonging to him and judged him in contempt of court for continual refusal to obey the subpena.

President Stops Leasing

One of the first actions of President Hoover on taking office in March was to announce that no more permits to prospect for oil on the public domain would be issued, and that leases on government oil lands would not be given except where required by law. Although the President may have been motivated by economic conditions in the oil industry, this policy removed the possibility of a repetition of the oil frauds which marked the administration of President Harding.

Toward the close of the year the Navy Department renewed its request of a year before that Congress enact new legislation to protect its oil reserve lands from drainage by granting authority to purchase privately owned tracts or leases within the boundaries of the reserves and to negotiate with owners of adjoining leases with a view of preventing drilling close to the edges of naval property.

Public Lands Ban Applied

Meanwhile the Federal government decided to put its own house in order as regards oil conservation. Immediately after taking office in March, President Hoover gave orders to stop the issuance of drilling permits and leases on the public lands. The President said:—"There will be no leases or disposal of government oil lands, no matter what category they may lie in, of government holdings or government controls, except those which may be mandatory by Congress. In other words, there will be complete conservation of government oil in this administration."

All the local land offices were ordered to receive no further applications for prospecting permits and to reject all pending permits. Some 12,000 such permits were outstanding, and the Department of the Interior at once began to review these with a view of cancelling those under which the required work had not been done. Such cancellations were made steadily through the year. In instances where it was clear that no money had been expended, the permits were at once cancelled; while in doubtful cases the permittees were given fifteen days to prove their right to a permit, although the department recognized equities where money had been spent in prospecting under the permits. The essence of the department's actions under the President's policy was that all pending applications were denied, group or contributory development of unproved areas was no longer permitted, and the only leases given were the so-called "A" leases, or those covering the one-fourth of the prospecting area which the law requires be leased to the discoverer of oil.

This policy of President Hoover met severe criticism from permit holders, from Congress, and from the governors of the public land States. The governors of Colorado, Utah, and Wyoming protested that only 2.5 percent of the total amount of oil produced in the country comes from the public land States; that there was no overproduction in these States, and that these States are not producing enough oil for their own consumption. The many protests failed to sway the President, however, and the Department of the Interior proceeded with its cancellation of permits. A number of suits were filed in the Federal courts to test the President's order by seeking writs of mandamus for the issuance of permits, but none of these were decided during the year. The conservation policy was also extended to Indian lands within the control of the government, and leases were granted only on those tracts where required by law.

The government took part in another conservation move which, while on a small scale served as an example for the operators of other oil pools. This was at Kettleman Hills, Cal., where the government owned about one-third of the land over the three domes of the pool which promised an enormous production of extremely high grade oil. Following the completion of the discovery well, there was a race for production in other parts of the field, accompanied by an excessive waste of gas. The Department of the Interior formed an agreement with the other landowners whereby drilling was restricted to a minimum for two years and the pool developed in a scientific and gradual manner.

During the year the Federal Oil Conservation Board issued as its third report a brief review of the present status of the oil conservation movement and a long treatise on the oil reserves of the entire world outside of the continental United States.

The Official Conclusion

Oil conservation conditions and the attitude of the present administration during the year were summed up by Ray Lyman Wilbur, Secretary of the Interior, in his annual report as follows:—

Primarily, the responsibility for the prevention of waste lies with the industry and with the governments of the States. That problem is far from solution. The position of the Federal government is not to interfere with the rights and duties of the local State governments but to lend such aid as it can and to participate in the solution of the problems. Voluntary co-operation in the industry and wise exercise of the police power by the States must be the basis for conservation. Until the present day of wasteful overproduction is over, the potential supply in the public domain must be safeguarded. With that need in view, the issuance of prospecting permits has ceased and extensions of existing permits have been granted only upon a showing of equities.

Unsound exploitation of the public dome in under oil prospecting permits has, in some cases, been shocking. Although the law allows two years within which very moderate drilling requirements may be met, and provides for extensions thereafter up to a possible total of nine years, an examination of the outstanding permits, occasioned by the President's conservation order, has so far disclosed that, up to November 15, 10,995 of these permits required cancellation for lack of diligence out of approximately 20,300 outstanding. They have been largely held for speculative purposes, and some have been used as a basis of blue-sky operations. The ratio of these frozen permits to the total outstanding has amounted to about 50 percent, representing prima facie noncompliance with the law to that extent. No permit which has been regarded as sufficiently valuable by its holder to justify compliance with the law has been affected by this order. The total area of active permits will probably not exceed 10,000,000 acres upon which genuine development is now in progress, as against 40,000,000 acres covered by permits before this house cleaning was undertaken. The public domain is being rapidly cleared of these abuses.

The time has come when conservation of the nation's resources must be regarded as a national strategy to be settled by agreement of interests across the table top, rather than by conflict thousands of feet under the ground. Mishandling of a great exhaustible national resource will stand out more and more clearly as the supplies are diminished. The diminishing character of these supplies makes this a time of peculiar responsibility in their administration. The present conservation policy will be continued.

Oil Conservation Plan Blocked

Vigorous action respecting government lands but a virtual deadlock respecting private operations marked the course of the oil conservation movement in 1929, a year that saw more active attempts at the wise use of the nation's petroleum resources than any of its predecessors.

The oil industry and the Federal and State governments—for the problem concerns all jointly—were faced at the opening of the year with a nicely worded academic report which had just been presented to the Federal Oil Conservation Board by its so-called "Committee of Nine." This committee concluded that the antitrust laws should be amended to permit the co-operative development of oil pools and to permit agreements for curtailment of production to current needs, together with similar action by States and certain collateral legislation regarding Federal lands and conservation of gas. The report gathered dust throughout the year, however, and no serious moves were made to secure the suggested legislation.

Meanwhile the most serious overproduction of crude oil in the history of the industry forced leading oil men to change their traditional opposition to curtailment plans, and in March the American Petroleum Institute adopted a plan whereby the industry would voluntarily restrict its output to the level of 1928, machinery to be created for apportioning the production by regions. This was a serious and carefully made plan and was backed by all of the leaders of the petroleum producing industry of this country and of the world. The move was hailed as exemplifying the new trend of self-government by industry and co-operation with Federal officials in a national problem.

But when the leaders of the American Petroleum Institute laid the plan before the Federal Oil Conservation Board they ran against the stone wall of the Department of Justice. The new Attorney-General, William D. Mitchell, informed the board that it had no authority to sponsor any agreement which might be contrary to the antitrust laws, and while he said he was without power to pass on the legality of the A. P. I. plan, the Attorney-General intimated that suits to determine this question could be expected if such a production curtailment proposal were put into effect. This distinct rebuff from the Federal govrnment was evidently a great disappointment to the oil men, and some of them expressed the view that conservation was not possible unless it be after sweeping revision of Federal statutes. Others, however, were of the opinion that the institute's plan was not contrary to the antitrust laws and that the oil industry could go ahead with its conservation plans without the co-operation of the Federal board.

The whole question was threshed out at a round-table conference on natural resources in connection with the annual meeting of the Chamber of Commerce of the United States. All aspects of conservation and petroleum production curtailment, technical, legal, and commercial, were discussed by members of the industry, but no conclusions were reached, and except for the exchange of views nothing resulted from this debate. Toward the latter part of the year a number of conditions, mostly economic, contributed to a certain degree of curtailment, so that the problem of overproduction was not quite so acute as early in the year, although this result could scarcely be attributed to the efforts of either the Federal Oil Conservation Board or the American Petroleum Institute.

Unitization Is Advocated

Meanwhile the Federal board sought to produce some sort of a plan which might take the place of that which it had rejected. On the theory that the temporary curtailment of production, even if legal, is not a solution to the problem, but that the true solution lies in the regulation of drilling and the scientific development of an oil pool as a unit, the board proposed a compact among the principal oil producing State to regulate drilling and production on privately owned oil lands. This was a further recognition that the constitution gives no authority for the Federal government to control the use of national resources, and that this problem is within the jurisdiction of the States.

This plan met with considerable favor in the oil industry, and Dr. George Otis Smith, director of the United States Geological Survey, was sent by the oil board to discuss the matter in a preliminary way with the governor of half a dozen of the principal oil-producing Western States. Fair success was reported by this emissary, and President Hoover called a conference of the governors of all the oil States at Colorado Springs June 10. For three days, representatives of the Federal government, State governments, and the oil industry discussed the problem. The question was badly muddled by the interjection of discussion of President Hoover's policy toward government-owned lands, and again by a veiled threat of Federal control of the petroleum industry, and the only tangible result of this convention was a recommendation that further committees be appointed, further studies be made, and a further meeting be held on the subject some time in the future. This conference apparently succeeded in discouraging all conservation plans on the part of either the Federal government or the petroleum industry, for nothing more was done or said on the subject the rest of the year.

Courts Decide Tariffs and Oil Taxes

The number of suits involving oil matters coming before the Supreme Court of the United States, and the definition of the scope of the United States Court of Customs Appeals and the enlargement of its jurisdiction to include patent questions, were the outstanding characteristics of the work of the high Federal courts in 1929.

An unusually large number of State oil taxes were brought before the supreme court on questions of constitutionality. The Tennessee gasoline tax law of 1927 was declared unconstitutional in its price-fixing features in a case brought by the Standard Oil Company of Louisiana and the Texas Company. This State had a commission to regulate the petroleum business in many ways, including the fixing of retail prices. The supreme court held that gasoline, being an ordinary commodity of trade, is not affected with the public interest necessary to permit government regulation of prices.

The State of Louisiana was enjoined by the supreme court from collecting a petroleum severance tax from the Ohio Oil Company during litigation to test the constitutionality of the tax. The law in question provided a graduated severance tax, dependning on the gravity of the crude oil, and the claim was that this discriminated against different oils and violated the equal protection clause of the Federal constitution.

In another case involving Louisiana, the Carson Oil Company secured a ruling from the supreme court that the State could not collect a property tax on oil held in transit in the State awaiting export to Europe.

The State of Kentucky has a tax on gasoline used in the State, which it attempted to collect from the Metropolis Ferry Company, operating between Kentucky and Illinois and purchasing all of its gasoline in Illinois. The supreme court held that this was a burden on interstate commerce not countenanced by the constitution. Two State gasoline taxes were upheld by the supreme court in 1929, those of Montana and California. The Montana tax was on sales, but did not apply to gasoline imported from other States for the use of the importer. The Hart Refineries contested on the ground that this gave dealers outside the State an advantage in selling to this class of customers, but the supreme court said that it could not question the wisdom of the State in taxing the sale and not the use of gasoline.

Gasoline Tax Not a Toll

The California gasoline tax law was contested by George B. Williams on the ground that, as the tax was rebated when not used to operate on the public highways, it was in effect a toll and in violation of the Federal highway aid laws, which provide that roads built with Federal funds shall be free from toll, but the supreme court refused to entertain such a contention. The court also took under advisement during the year the constitutionality of the Mississippi gasoline sales tax when applied to gasoline sold by the Superior Oil Company into Louisina. In another oil case the supreme court upheld the ordinance of the city of Marysville, Kans., in requiring that gasoline tanks in the city limits be buried underground. The Standard Oil Company and the Sinclair Refining Company had contended that this was an abuse of the police power, as tanks above ground were equally safe.

The supreme court again lived up to its determination to keep its docket up to date, and disposed of many cases within the same term in which they were filed. This was accomplished in part by denying reviews to all cases where no new Federal questions appeared to be involved, and the Department of Justice co-operated by reducing the number of appeals taken to the court. In the more than 800 cases disposed of during 1929 there were many of great general interest and importance. The constitutionality of the

pocket veto between sessions of a Congress was upheld, and tnere were important immigration, naturalization, interstate commerce, and tax decisions.

The packers' consent decree of 1920, suspended since 1925 by litigation, was upheld and cleared for enforcement by the removal of the California Cooperative Canneries, which sought to intervene. Meanwhile the packers began action in the lower Federal courts in the District of Columbia to have the decree dissolved. Convictions of Harry F. Sinclair for contempt of court and contempt of the senate during litigation of the Teapot Dome oil scandals were upheld, and the supreme court also gave the Department of the Interior authority to reopen the award by former Secretary Albert B. Fall of Elk Hills oil lands to the Standard Oil Company of California.

Patents and Tariffs

An involved but interesting and important litigation was carried to the supreme court by the Bakelite Corporation over the constitutionality of section 316 of the flexible provisions of the tariff act. A finding of the United States Tariff Commission that articles of synthetic phenolic resin of form C were imported in violation of patent rights and subject to a presidential embargo against unfair competition in importing was appealed, as provided by the act, to the United States Court of Customs Appeals by Frischer & Co. and other importers on the grounds, among others, that patent infringements are not unfair competition within the jurisdiction of the Tariff Commission. The Bakelite Corporation challenged the right of review because of the constitutional provision that inferior Federal courts may consider only "cases" and "controversies" in a technical sense, which it claimed a Tariff Commission proceeding was not. The lower court held that it was an inferior court, but that the subject was a case, but the supreme court held that the court is not a judicial court but a legislative court and can therefore consider anything directed by Congress, whether or not a Tariff Commission proceeding is a properly constituted case. The matter then returned to the court of customs appeals where toward the close of the year it was argued on its merits, involving a large number of points of importance but of less general interest.

This decision of the supreme court that the customs appeals court is not a judicial court, indirectly upheld the constitutionality of an act which Congress had just passed to give this court jurisdiction of appeals from the United States Patent Office. These appeals, admittedly not regularly constituted cases, had been heard by the Court of Appeals of the District of Columbia, also a court with wider powers than regular Federal courts. This law became effective in April and the court was renamed the United States Court of Customs and Patent Appeals and its personnel brought up to its full strength of five justices through the appointments of former Senator Irvine R. Lenroot of Wisconsin and former Representative Finis Garrett of Tennessee. While a large number of patent cases were taken up by the court, only a few reached decision by the close of the year.

Among the more important chemical tariff decisions of this court during the year were those holding that fatty products must meet definite chemical specifications to be classed as stearic acid; that there is a marked difference between powdered soap and soap powder, and that classification as toilet soap depends on use; that small, ornamental perfume bottles should be classed as containers for the transportation of merchandise; that obscured glass means only glass given a certain treatment and does not include all non-transparent glass; that thin transparent sheets of cellophane are dutiable as compounds of cellulose, and that copper sulphocyanide is not a true cyanide or compound of cyanide.

One of the patent decisions rendered during the year upheld the validity of the synthetic ammonia catalyst patent of the Atmospheric Nitrogen Corporation. An important case filed, but not argued, before this court during 1929 involves the validity of an anti-dumping order against phosphate rock from Morocco.

Drug Control Practices Developed

The second full year of the segregation of chemical regulatory work in the Department of Agriculture in the Food, Drug, and Insecticide Administration found that organization working efficiently as a single unit.

Further steps were taken during 1929 toward brigading field operations under all of the six acts administered by this bureau. Inspectors were trained to sample any or all of the commodities covered by the six laws, and laboratories were equipped to examine all commodities, there being very little specialization left in the field force. The department continued its announced policy of preventing infractions of any of the laws by co-operation with the industries concerned, and the factory inspection system was further extended.

Still operating under the project system which has governed the administration of the food and drugs law for a number of years, the department in 1929 made a special drive against preparations put out as treatments for influenza and malaria. Asserting that the consensus of modern reliable medical opinion is that no single drug treatment is known to be effective in influenza cases, the department examined more than a thousand such preparations with a view to securing their labeling in conformity with the law. A large number of products were withdrawn from the market or their labels changed after the seizure of a single consignment. Many of the malaria remedies examined did not contain cinchona alkaloids in sufficient doses to be effective.

Work was continued on the survey of antiseptics, particularly those advertised as dentifrices, and a number of allegedly unwarranted therapeutic claims were deleted from the labels of these preparations. Preparations advertised to contain vitamins, particularly extracts of codliver oil, were given very careful attention in 1929, and many were removed from the market. A great deal of attention was also given to various standard pharmaceutical products, and the names of many organs and diseases were removed from the labels, and these were changed to indicate the composition of a preparation rather than the disease conditions for which it might be used.

One project given particular attention in 1929 was veterinary medicines, and revised labeling of many of these was secured.

Investigation of Ether

The campaign against anesthetic ether which had deteriorated in storage was also pressed vigorously, with the result that large quantities of poor ether were removed from the market and the manufacturers were stimulated in their efforts to prevent such deterioration. An investigation was made of preparations of ergot of rye, and several suggestions made as to the improvement of methods of manufacture of ergot preparations. Every shipment of crude ergot of rye imported was examined and assayed, and while it was found that very few shipments were below standard, studies were continued on new methods of testing ergot.

Many low-strength flavoring extracts were found, and in a number of these cases the manufacturers were able to improve their manufacturing methods so as to remedy these faults. The campaign was continued against adulterated and misbranded olive oil, particularly the addition of cottonseed oil and the use of brands and containers of other packers.

Inspection work under the insecticide act was largely changed from the practice of inspecting shipments to that of factory inspections, a practice which had been followed in administering the food and drugs act. This change in method at first brought opposition from manufacturers, but the plan was made effective and proved more efficient than the system of checking the many thousands of interstate shipments. Special investigations of insecticides were continued with special attention to the determination of fluorine, toxicity of pyrethrum flowers and extracts, and cotton boll weevil preparations.

The administration of the caustic poisons act proceeded quietly through the continuation of a survey of manufacturers of products that come within the scope of the law. Some 900 establishments were inspected, and thousands of labels were scrutinized. Most manufacturers were found to be desirous of labeling their products in exact conformity with the law, and no court action has yet been brought under the caustic poisons act. Particular attention was paid to the enforcement of this act, during 1929, to lye, drain-pipe openers and household ammonia water.

Naval Stores Conditions

In administering the naval stores act only two cases of adulteration of turpentine and two instances of misgrading of rosin were discovered during the year. Practically all the rosin made in the gulf region was inspected by government graders, while government grading, at the request of producers, was extended, for the first time, into the eastern section of the naval stores belt. A new standard for sulphate wood turpentine was promulgated in 1929, and two sets of rosin standards were prepared and placed on deposit with members of the trade.

Notable during the year was the cooperation of the Food Drug and Insecticide Administration with other departments of the government particularly the Post Office Department in its campaign against fraudulent use of the mails, and the Federal Trade Commission in its work against misrepresentation in advertising.

The department continued its attempt to co-operate with the trade wherever possible, and a number of groups of manufacturers conferred with the officials at various times. A group of naval stores producers and consumers met with the department in the Fall to suggest methods of improving administration of the naval stores act. The joint contact committee of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association largely completed its work on tolerances for tablets and took up the study of ampuls.

Dr. J. K. Haywood, who for many years was in charge of enforcement of the insecticide act, died early in 1929, while the bureau also lost, through resignation, the services of Dr. Lyman F. Kebler, head of the collaborative office of the administration.

Multiple Seizures

The practices of the drug control section of the administration came in for sharp criticism on the part of many branches of the trade during 1929. The long existing right of making multiple seizures and court trials of a single product was severely attacked, as was the alleged high-handed and arbitrary attitude of the enforcement officials regarding label claims on medicinal preparations, it being asserted that the policy of the administration would lead to the removal of so much from the labels that laymen would not know the virtues of the preparations and self-medication would be eliminated. These critcisms were squarely met by the officials, but whenever any of them, particularly Dr. J. J. Durrett, chief of the drug control unit, appeared at trade association meetings, which was frequently, they were subjected to an unusual amount of questioning regarding their policies and practices. On the other hand the present methods of administering the food and drugs act were severely attacked as being too lenient and too much to the liking of manufacturers in a book by Dr. Harvey W. Wiley, the first chief enforcement officer of this law.

An application for an injunction against the use of multiple seizures was brought in the Federal courts by the National Remedy Company, Boston, manufacturer of "B. and M. External Remedy," but the court upheld the legality of this practice. In spite of this decision, however, or because of it, the agitation in the trade against multiple seizures increased, although multiple seizures were admittedly more of a threat than an actual weapon. As a result of this Walter W. Campbell, director of regulatory work of the department, issued a lengthy statement defending the practice and outlining the conditions of its application. A movement gained considerable headway for the creation of some sort of joint committee of all branches of the drug trade to work with the Department of Agriculture in securing what might be considered a reasonable enforcement of the food and drugs act, but no definite results came from this movement during the year.

Prohibition in Its Tenth Year

The closing year of the first decade of the national prohibition act saw the system of regulating industrial alcohol and medicinal liquor working more smoothly than ever before, but still subject to criticism and suspicion from some quarters.

No changes were made in the organization of the Bureau of Prohibition during the year, and only minor changes in regulations were made. There were some changes in the personnel, however, as Alf Oftedal resigned as Assistant Commissioner of Prohibition and was succeeded by Harry P. Anslinger, chief of the foreign control division of the bureau and formerly a foreign service officer of the Department of State. Dr. B. R. Rhees, formerly narcotic agent in Washington, was named deputy commissioner in charge of prohibition, filling the vacancy left by the resignation of James E. Jones. In the Department of Justice, Mrs. Mabel Walker Willebrandt resigned as Assistant Attorney-General in charge of prohibition work, and was succeeded by G. Aaron Younquist. The work of putting the field service of the Bureau of Prohibition under the civil service laws progressed during the year and the organization of the offices of the local administrators was put in good order. The storekeeper-gaugers employed in alcohol plants, distilleries, and bonded warehouses, were transferred from the Bureau of Internal Revenue to the Bureau of Prohibition.

The revised official prescription used by doctors for prescribing medicinal liquor worked successfully through the year to the satisfaction of physicians, druggists, and enforcement officers, and no changes were made in methods of controlling medicinal liquor. The technical division, which supervises permits issued under title III of the act, made no material changes in its work during the year. All formulas involving the use of tax-paid intoxicating liquors were examined and recommendations made to the prohibition administrators. The centralization of this phase of the work at the Washington laboratory was continued, as was the general supervision of the labels and literature used in marketing alcoholic products.

Investigation was continued into the existing formulas for specially denatured alcohol, and substantial results were secured in eliminating weaker formulas from certain lines of industry, thus reducing diversion and assisting legitimate industry to secure denatured alcohol better adapted to its needs. The continued policy of withdrawing certain specially denatured alcohol formulas and the substitution of others was said to have benefited the industries involved and to have reduced diversion to illegal purposes.

Limitation of Production

The policy of limiting the production of industrial alcohol to the actual need of legitimate industry was continued for a second year during 1929 with apparent success. Each industrial alcohol plant was allotted a fixed quota of the total alcohol to be produced, with a provision that only 40 percent of the total quota for the year could be produced during the first six months of the calendar year, provided that legitimate industries did not require an excess of that quantity. This program prevented over-production and unstable conditions in the trade and greatly reduced the diversion of industrial alcohol for illegal purposes. Some 200,000,000 gallons of alcohol were produced in 1929, this being a substantial increase over the preceding year. This was accounted for by the larger anti-freeze demand, increased use of lacquers, expansion of the rayon industry, and the growth of miscellaneous chemical industries requiring alcohol. The possibility of a high duty on blackstrap molasses, the raw material for alcohol, also was a factor in the increased production.

The more important regulations issued by the Bureau of Prohibition during the year dealt with alcoholic medicinal preparations sold without permits, such as wine tonics and malt tonics. The solid content of these products was increased, and regulations were made to insure their sale only for medicinal purposes and through the usual drug channels. Regulations concerning the use of whisky and brandy in the manufacture of medicinal preparations were also tightened with a view of securing the use of plain alcohol wherever possible. The shipment of alcohol by tank trucks and wagons was specifically forbidden.

Stocks of medicinal whisky became so depleted during the year that it was necessary for the Bureau of Prohibition to issue permits for its manufacture so that it might age the required four years before being needed for use.

Early in the year Congress passed the Jones-Stalker bill providing greatly increased penalties for violations of the prohibition law. Proposals of the alcohol-using trade that special exemption be given employers whose employees mishandled their stocks of alcohol were not approved by Congress, but a provision was added to the bill directing the courts to apply the increased penalties only in the more serious violations.

Enforcement Transfer Proposed

In his inaugural address in March, President Herbert Hoover proposed transferring a major portion of the work of the Bureau of Prohibition to the Department of Justice. This proposal met objections from various alcohol-using industries on the ground that the Treasury Department had always administered the internal revenue laws affecting alcohol, and that the personnel of this department was well acquainted with the conditions in the trades; whereas, the Department of Justice was primarily interested in detecting violations of law. If any transfer be made, they urged that administration of the permit system be retained in the Treasury Department. In June, President Hoover asked Congress to create a joint committee to study this proposal, declaring that it was already being considered by officials of the departments involved. This proposal was not acted on by Congress, however.

Another creation of President Hoover, the Commission on Law Observance and Law Enforcement, spent considerable time in studying prohibition enforcement, and toward the close of the year this body prepared to submit a report which it was predicted would recommend some reorganization in prohibition enforcement work, while debate in Congress indicated that some changes in the enforcement machinery would be given serious consideration.

Enforcement of the Harrison narcotic law, one of the functions of the Bureau of Prohibition, proceeded during the year without event as far as

the drug trade was concerned. The Federal Narcotics Control Board, which administers the narcotics import and export law, received considerable criticism in the press because of the amount of narcotics permitted entry, and as a result its annual meeting in the fall was marked by unusual length and detailed consideration of applications for import permits. As the board was unable to reach a decision before the close of the year, importers were given temporary quotas to permit them to proceed with foreign contracts. Toward the latter part of the year there was considerable discussion of proposed legislation to separate narcotics and prohibition enforcement and to create a separate bureau of narcotics in the Treasury Department, but the suggestion did not take definite legislative form during the year.

Muscle Shoals Not Disposed Of

Another year of inactivity was written in 1929 to the decade of controversy over the disposal of the huge hydro-electric plants which the Federal government built during the war for the fixation of atmospheric nitrogen.

After ten years of wrestling with this problem, Congress in 1928 passed its first bill for putting the plants to use, only to have the bill given a pocket veto by President Coolidge during the summer adjournment. This bill would have created a government corporation to produce fertilizer for distribution to farmers at low prices, and was opposed by fertilizer manufacturers and the opponents of government operation. Congress opened with some uncertainty regarding the constitutionality of this veto, as the validity of a pocket veto at the close of a session as distinguished from the expiration of the life of a Congress had never been judicially determined. This doubt was resolved later in the Spring by the Supreme Court of the United States in a parallel case involving a pocket veto of an Indian bill, the court holding that the presidential veto was valid, and that the bill was not a law.

Congress Tries Again

Anticipating this outcome, members of both house and senate proceeded to push other plans for getting the Muscle Shoals plants into operation. The House Committee on Military Affairs took up the consideration of a bill for the acceptance of the bid of the American Cyanamid Company. Brief hearings were held, at which W. B. Bell, president of the American Cynamid Company, promised immediate production of highly concentrated fertilizer, and Charles J. Brand, secretary of the National Fertilizer Association, opposed the bill on the ground that the terms of the lease meant such a small return and amortization on the huge government investment at Muscle Shoals that the American Cynamid Company would, in effect, be operating with a subsidy that would demoralize the fertilizer industry for years.

The committee disapproved this lease, but a week later a quorum of the committee, meeting without the chairman, reconsidered its action and favorably reported the bill to the house. After a heated preliminary discussion, the report was ruled to be in order, whereupon the chairman of the committee, John M. Morin, filed a minority report opposing the bill. The seventieth Congress came to an end March 4 without further action on Muscle Shoals.

Although the special session of Congress which was called by President Hoover was engrossed with farm relief and tariff-revision plans, a number of bills were introduced in both house and senate embodying various schemes for ending the idleness of the expensive wartime plants at Muscle Shoals. None of the bills contained proposals differing particularly from those which had been made many times previously and no action was taken on any of them during the year.

Lobbying Is Charged

With the opening of the regular session in December, 1929, plans were actively revived for serious consideration of the subject. Senator George W. Norris of Nebraska again championed the bill which President Coolidge had vetoed, and while there were indications that it would gain much support in the Senate a number of amendments were proposed which promised lengthy debate. Before the close of the year an agreement was reached in the senate to bring up the Muscle Shoals bills after the disposition of tariff revision.

One other aspect of the situation, which developed near the close of the year was a proposal that the senate include in its general investigation of lobbying activities the efforts of the National Fertilizer Association to defeat the Norris bill which later received the presidential veto. This lobbying had been carried on by the members of the association themselves who visited their own members of Congress and who published their activities frequently in the public press. Officials of the association declared that they were confident that such an investigation would show nothing for which the association need apologize.

Definite recommendations regarding the disposal of the Muscle Shoals properties were made by President Hoover in his annual message to Congress in December. He said:—

It is most desirable that this question should be disposed of. Under present conditions the income from these plants is less than could otherwise be secured for its use, and more especially the public is not securing the full benefits which could be obtained from them.

It is my belief that such parts of these plants as would be useful and the revenues from the remainder should be dedicated for all time to the farmers of the United States for investigation and experimentation on a commercial scale in agricultural chemistry. By such means advancing discoveries of science can be systematically applied to agricultural need, and development of the chemical industry of the Tennessee Valley can be assured.

I do not favor the operation by the government of either power or manufacturing business except as an unavoidable by-product of some other major public purpose.

Any form of settlement of this question will imply entering upon a contract or contracts for the lease of the plants either as a whole or in parts and the reservation of facilities, products, or income for agricultural purposes. The extremely technical and involved nature of such contracts dealing with chemical and electrical enterprises, added to the unusual difficulties surrounding these special plants, and the rapid commercial changes now in progress in power and synthetic nitrogen manufacture, lead me to suggest that Congress create a special commission, not to investigate and report as in the past, but with authority to negotiate and complete some sort of contract or contracts on behalf of the government, subject, of course, to such general requirements as Congress may stipulate.

Necrological Record, 1930

The following list comprises the names of persons connected with the various industries in the field of the Oil, Paint and Drug Reporter, who died during 1929. Age, date of death, line of business or profession, and the date of publication of the obituary notice are also given:—

	Age.	Date of death.	Business or profession.	Date of publication.
Allen, Dr. Edwin	64	Nov. 11	Scientific writer	Nov. 18
Allen, William H.	73	Aug. 23	Chemist	Sept. 2
Ames, John McEwen	64	Jan. 6	Oil refining	Jan. 21
Armbruster, Frank E.	55	Dec. 7	Printing ink	Dec. 16
Auer, Dr. Karl	72	Aug. 4	Chemist	Aug. 12
Ault, Charles H.	68	May 14	Printing ink	May 20
Austin, Prof. Leonard S.	83	Oct. 29	Metallurgist	Nov. 4
Balcom, Dr. R. W.	52	Oct. 17	Chemist	Oct. 21
Balfour, Sir Robert	85	Nov. 4	Petroleum	Nov. 11
Ballard, James A.	55	Feb. 28	Chemicals	Mar. 4
Barnard, William H.	68	Oct. 5	Salt	Oct. 14
Berglund, Arthur F.	50	Mar. 20	Linseed crushing	Mar. 25
Bloor, Frank W.	61	Aug. 26	Drugs	Sept. 16
Boand, J. A.	69	Sept. 23	White lead	Oct. 7
Boericke, Dr. Felix A.	72	Feb. 23	Medicines	Mar. 4
Bogart, Mrs. Frank E.	67	Oct. 21		Oct. 28
Boldt, Charles	61	Oct. 10	Bottle manufacturing	Oct. 14
Bolton, Dr. Benjamin M.	72	Aug. 12	Bacteriology	Aug. 19
Brawner, John W.	55	Jan. 24	Drugs	Feb. 4
Brent, Bishop Charles H.	67	Mar. 27	Ecclesiast	April 1
Breves, Dr. Rudolphe	61	April 25	Lacquers	May 6
Brice, James W.	63	April 8	Salt	April 15
Brown, Frank A.	76	June 23	Paints	July 1
Brunner, Sir John	63	Jan. 16	Chemicals	Jan. 21
Buchler, Walter	..	Jan. 12	Drugs	Mar. 4
Burke, Edwin	..	Nov. 2	Coconut oil	Nov. 25
Burke, Frank G.	70	June 18	Soap	June 24
Burnett, John T.	61	Feb. 17	Flavoring extracts	Mar. 4
Candler, Asa Griggs	77	Mar. 12	Drugs	Mar. 18
Carpenter, Charles E.	66	April 7	Industrial oils	April 15
Cashman, William Timothy	56	Dec. 26	Chemicals	Jan. 21
Chittenden, E. D.	70	Mar. 16	Fertilizers	Mar. 25
Clark, Cummings C.	28	Oct. 8	Paint journalist	Oct. 14
Clark, Franklin St. Clair	..	April 25	Chemical engineer	May 6
Cordrey, Oliver	..	Oct. 26	Fertilizers	Nov. 4
Courtis, Thomas	65	Nov. 15	Glue	Nov. 25
Cowan, David M.	74	May 5	Wholesale drugs	May 13
Cowles, Alfred Hutchinson	70	Aug. 13	Metallurgy	Aug. 19
Craig, Percy L.	61	Dec. 17	Petroleum	Dec. 23
Dee, Thomas J.	41	Aug. 29	Chemicals	Sept. 9
Dennis, E. B.	59	Mar. 22	Fertilizers	April 1
Doheny, E. L., jr.	35	Feb. 16	Petroleum securities	Feb. 25
Dunne, David M.	77	Jan. 2	Paints	Jan. 21
Eckman, Dr. James R.	40	Aug. 2	Chemistry	Aug. 12
Eddy, George M.	67	Nov. 11	Fertilizer mixtures	Nov. 18
Elting, Philip LeF.	62	June 17	Paints	June 24
Ennis, William H.	62	Nov. 2	Varnishes	Nov. 18
Farnham, Frederick Alonzo	56	Sept. 30	Paints	Oct. 7
Filmer, Walter L.	62	Dec. 29	Aromatic chemicals	Jan. 6,'30
Fitzgerald, Francis A. J.	59	Oct. 26	Chemistry	Nov. 4
Fitzhugh, William M.	75	May 18	Mining engineering	May 27
Forrester, James	49	April 18	Paints	April 29
Francis, Walter M.	81	Nov. 12	Paints	Nov. 25
Franklyn, Charles G.	84	Jan. 11	Gas oil	Jan. 21
French, Clayton	45	Sept. 3	Chemistry	Sept. 9
Gates, Frederick T.	75	Feb. 6	Medical research	Feb. 11
Gilpin, Henry B.	76	Dec. 17	Wholesale drugs	Dec. 23
Godding, John G.	76	April 8	Retail drugs	April 15
Gooch, Prof. F. A.	76	Aug. 12	Chemistry teaching	Aug. 19
Gorman, Arthur	40	Mar. 3	Petroleum	Mar. 11
Haggin, Louis T.	81	Mar. 19	Copper	Mar. 25
Hall, Charles Beasley	69	Dec. 22	Chemicals	Dec. 30
Hancock, John	58	Nov. 2	Petroleum	Nov. 11
Haste, James H.	61	Jan. 8	Photographic films	Jan. 14
Heathcote, William E.	65	April 16	Petroleum	April 22
Hegeman, Benjamin A.	68	Mar. 6	Varnishes	Mar. 11
Hein, Albert H.	61	Jan. 9	Dyestuffs	Jan. 14
Henderson, Frederick B.	..	Jan. 13	Petroleum	Jan. 21
Herty, Mrs. Charles H.	..	Aug. 19		Aug. 26
Higgins, Charles M.	75	Oct. 21	Inks	Oct. 28
Hill, Albert	58	Mar. 10	Petroleum refining	Mar. 18
Hill, William H.	77	July 31	Proprietary medicines	Aug. 5
Hinchman, F. D. C.	81	Mar. 26	White lead	April 8
Hinds, A. S.	84	Mar. 8	Honey and almond creams	Mar. 25
Hoffman, Phillip C.	64	Dec. 18	Chemicals	Dec. 23
Hollister, Uriah S.	90	Sept. 1	Petroleum	Sept. 16
Hutton, George B.	70	Mar. 6	Importing	Mar. 11
Ingalls, Robert Collyer	56	Sept. 11	Chemicals and drugs	Sept. 16
Isom, William H.	69	Mar. 23	Petroleum	April 1
Ivey, R. L.	..	July 30	Naval stores	Aug. 5
Jergens, Andrew	75	Jan. 11	Soaps	Jan. 14
Jones, Jesse L.	63	Jan. 21	Electro-chemistry	Jan. 28
Kalbfleisch, Franklin H.	83	Jan. 30	Chemicals	Feb. 4
Keith, S. Elliott	59	July 26	Petroleum	Aug. 5
Kelley, Charles C.	59	April 20	Pharmaceuticals	April 29
Kerns, E. J.	46	July 16	Chemical engineer	July 22
King, Hugh	87	Oct. 21	Petroleum	Oct. 28
King, William H.	80	Aug. 14	Paints	Aug. 26
Koester, William	64	Mar. 11	Paint materials	Mar. 18
Krebs, Henrik J.	82	Oct. 7	Pigments and chemicals	Oct. 14
Kunze, Robert	68	July 30	Fertilizers	Aug. 8
Lackey, William G.	55	Mar. 4	Petroleum	Mar. 11
Lawrence, John B.	85	Mar. 4	Wholesale drugs	Mar. 11
Leighton, Charles Blair	62	Dec. 23	Essential oils	Dec. 30
Long, W. N.	..	April 11	Petroleum	April 15
Luse, John B.	72	Aug. 7	Wholesale drugs	Aug. 12
Lyons, Lucien E.	50	April 10	Natural gas	April 15
McClintock, Ralph, jr.	22	Jan. 31	Shellac bleaching	Feb. 4
McCrudden, Daniel J.	59	Feb. 8	Varnish	Feb. 18
McNamara, Michael	90	Nov. 11	Varnish	Nov. 18
Maginnis, Frank J.	48	Dec. 29	Licorice	Jan. 6,'30
Marsh, Frederick A.	66	June 18	Castor oil	June 24
Matthies, Dr. Otto	..	Oct. 24	Coaltar	Oct. 28
Mehmken, George A.	57	Mar. 23	Petroleum	April 1
Merrill, Dr. George P.	75	Aug. 15	Geology	Aug. 19
Merseles, Theodore F.	65	Mar. 6	Paint materials	Mar. 11
Meyer, E. H.	70	Mar. 2	Paint	Mar. 11
Miles, Dr. Franklin	83	April 1	Proprietaries	April 15
Miller, Samuel W.	..	Jan. 3	Chemical engineering	Feb. 11
Morlock, Henry F.	63	Aug. 7	Gums	Aug. 12
Murphy, Henry C.	65	Oct. 15	Chemicals	Aug. 19
Murray, Dr. W. J.	74	Mar. 30	Wholesale drugs	April 8
Neher, Prof. Fred	62	Dec. 10	Chemistry teaching	Dec. 16
Nichols, Hannah B.	..	June 20		June 24
Norton, Lawrence A.	68	Nov. 1	Containers	Nov. 11
Osborne, Dr. Thomas B.	..	Jan. 29	Chemistry	Feb. 4
Owens, J. Albert	67	Feb. 23	Wholesale drugs	Mar. 4
Parks, Beaumont	60	Feb. 25	Petroleum	Mar. 4
Perkin, Dr. W. H.	59	Sept. 17	Chemistry teaching	Sept. 23
Pierce, Ralph W.	45	Jan. 31	Drugs	Feb. 4
Pomeroy, Theodore L.	61	Oct. 3	Petroleum	Oct. 7
Pope, Charles E.	68	Jan. 9	Paints and varnishes	Jan. 21
Prizer, Edward	73	Aug. 11	Petroleum	Aug. 19
Publicker, Edward	76	July 7	Commercial alcohol	July 15
Quinn, John C.	82	Mar. 27	Paints	April 8
Quinn, Martin F.	75	Mar. 30	Wood chemicals	April 8
Ramsaur, George T.	50	Jan. 18	Drugs	Jan. 28
Rieffiin, George T.	75	Nov. 18	Pharmaceuticals	Nov. 25
Riggs, Robert B.	74	May 11	Chemistry teaching	May 20
Robbins, John B.	71	June 21	Chewing gums	July 1
Robbins, Nelson C.	77	June 7	Varnishes	June 10
Robinson, Arthur Lee	63	Dec. 18	Wholesale drugs	Dec. 23
Robinson, Col. Wirt	65	Jan. 21	Chemistry teaching	Jan. 28
Rodenburg, Christian	85	July 8	Distilling	July 15
Roe, Frank J.	68	Feb. 9	Vanilla beans	Feb. 18
Rohrmann, Frank R.	67	May 6	Wholesale drugs	May 13
Ronan, Thomas J.	71	Mar. 1	Paints	Mar. 11
Ross, William G.	65	April 14	Asbestos	April 22
Schermerhorn, James B.	60	Dec. 2	Petroleum	Dec. 9
Schjolberg, Ragnar	65	Mar. 1	Codliver oil	Mar. 11
Seeley, Uriah	88	Oct. 3	Pharmaceuticals	Oct. 7
Sipe, James B.	84	Mar. 5	Paints and varnishes	Mar. 18
Skiddy, Wm. Wheelwright	84	Oct. 7	Natural dyes	Oct. 14
Slagle, Dr. Robert L.	63	Jan. 30	College president	Feb. 4
Slosson, Dr. Edward E.	64	Oct. 15	Scientific writer	Oct. 21
Smith, F. Morse	69	Mar. 22	Fine chemicals	Mar. 25
Solomons, Isaiah A.	71	Mar. 13	Wholesale drugs	Mar. 25
Southwick, George C.	62	Dec. 18	Paints and varnishes	Dec. 30
Sperr, Prof. Frederick W.	73	Nov. 19	Mining engineering teacher	Nov. 25
Squibb, Dr. Edward H.	77	July 7	Pharmaceuticals	July 15
Steele, Charles A.	..	Sept. 2	Pharmaceuticals	Sept. 23
Stranahan, Charles D.	70	Feb. 18	Sulphur	Feb. 25
Stevens, Edwin C.	72	July 23	Molasses	July 29
Swindell, William E.	50	Mar. 19	Bottle manufacturing	Mar. 25
Taggart, Thomas	72	Mar. 6	Drugs	Mar. 11
Taliaferro, John C.	70	Feb. 10	Containers	Feb. 18
Tappenbeck, William	67	Jan. 26	Spices	Feb. 4
Taylor, George	53	Nov. 12	Dry colors	Nov. 25
Taylor, Walter C.	63	July 17	Proprietary medicines	July 22
Tierney, John I.	54	Dec. 23	M. C. A. Secretary	Dec. 30
Tonkin, John	92	July 15	Petroleum	July 22
Trench, Charles S. L.	74	Nov. 8	Metals	Nov. 18
Tunison, Burnell R.	37	Aug. 8	Solvents	Aug. 12
Twitchell, Ernest	66	June 6	Chemistry	June 17
Von Tackey, Frank	77	Jan. 15	Petroleum	Jan. 21
Warnick, L. K.	59	Sept. 17	Vegetable oils	Sept. 23
Wasserschied, Rudolph C.	53	Sept. 2	Proprietary medicines	Sept. 9
Webb, Edward Alfred	78	July 23	Chemicals	Aug. 19
Welch, Robert L.	50	Jan. 21	Petroleum	Jan. 28
Wheeler, Wilberforce R.	42	Nov. 11	Varnishes	Nov. 25
White, Otho Holland	71	April 6	Proprietary medicines	April 15
Wickett, Frederick H.	61	May 14	Petroleum	May 20
Williams, Allan I.	85	Oct. 20	Petroleum	Oct. 28
Wilson, James H.	78	Mar. 27	Steel containers	April 8
Wyeth, Stuart	67	Dec. 30	Pharmaceuticals	Jan. 6, '30
Zurn, John M.	63	Aug. 11	Petroleum	Aug. 19

58-Year Record of Exports from the United States, 1871-1929

The following tables, compiled from official records, give export data, quantity and value, for fiscal* years to June 30, for all years for which figures are available, down to 1929:

*Figures for 1923 and 1924 revised in 1926 issue from calendar year records previously given

Absorbent Cotton, Gauze, and Surgical Dressings

	Pounds.	Dollars.
1925	2,965,413	2,093,420
1926	3,013,678	2,243,161
1927	3,204,898	2,226,210
1928	3,228,863	2,198,103
1929	3,377,324	2,300,160

Abrasives, Artificial, Steel Wool, Abrasive Paper, Etc.

	Pounds.	Dollars.
1922	7,198,459	1,519,308
1923	19,744,356	3,298,195
1924	19,003,877	4,346,331
1925	23,903,264	5,098,462

Not stated after 1925.

Abrasives, Wheels, Emery and Corundum

	Pounds.	Dollars.
1891	.....	34,651
1901	.....	172,766
1915	.....	736,879
1916	.....	1,630,265
1917	.....	3,846,101
1918	.....	4,697,443
1919	.....	3,323,219
1920	.....	2,546,991
1921	.....	2,439,021
1922	2,050,502	644,151
1923	1,766,654	580,772
1924	1,696,268	569,348
1925	1,531,754	495,247
1926	1,001,291	329,253
1927	727,091	239,732
1928	676,963	245,687
1929	785,338	272,373

Acetates, Amyl, Ethyl and Butyl

	Pounds.	Dollars.
1928	274,357	43,544
1929	903,292	178,405

Acetone

	Pounds.	Dollars.
1928	2,942,383	239,130
1929	6,468,871	571,361

Acid, Acetic

	Pounds.	Dollars.
1922	5,079,880	367,365
1923	3,633,767	290,081
1924	486,674	64,666
1925	879,288	90,536
1926	447,605	55,869

Not stated after 1926.

Acid, Boric (Boracic)

	Pounds.	Dollars.
1922	1,560,996	189,581
1923	1,245,660	149,950
1924	728,849	82,245
1925	762,144	78,735
1926	1,119,964	105,169
*1927	.....	.....
1928	1,923,560	114,629
1929	4,222,688	177,913

* Not enumerated.

Acid, Carbolic

	Pounds.	Dollars.
1918	8,688,554	4,236,288
1919	5,810,314	2,173,171
1920	2,223,205	420,101
1921	659,890	86,297
1922	111,479	19,008
1923	232,830	54,389
1924	51,364	8,016

Not stated after 1924.

Acid, Nitric

	Pounds.	Dollars.
1918	961,494	101,040
1919	737,273	86,788
1920	820,517	105,882
1921	267,119	48,552
1922	234,736	27,587

Not stated after 1922.

Acid, Picric

	Pounds.	Dollars.
1918	53,688,240	33,902,957
1919	12,507,483	6,565,473
1920	8,073	3,430
1921	3,730	2,142
1922	466	288

Not stated after 1922.

Acid, Stearic

	Pounds.	Dollars.
1923	3,686,425	404,179
1924	2,191,052	281,313
1925	2,059,307	277,476
1926	1,108,262	168,016
1927	1,847,507	199,419
1928	2,117,451	224,446
1929	1,962,951	259,175

Acid, Sulphuric

	Pounds.	Dollars.
1913	9,790,532	89,783
1914	12,131,750	125,892
1915	46,771,510	516,436
1916	82,020,246	1,990,532
1917	58,604,048	963,888
1918	67,654,722	1,119,907
1919	47,413,636	805,430
1920	32,334,393	778,287
1921	18,600,704	446,380
1922	13,979,319	265,560
1923	7,261,052	156,204
1924	10,364,010	184,335
1925	10,274,662	173,120
1926	8,244,765	158,062
1927	7,932,630	167,833
1928	7,163,281	153,712
1929	6,418,729	137,837

Acids and Anhydrides, All Other

	Pounds.	Dollars.
1871	.....	57,730
1881	.....	39,240
1891	.....	121,851
1901	.....	198,233
1913	.....	364,347
1914	.....	357,035
1915	.....	2,611,741
1916	.....	22,717,335
1917	.....	54,725,124
1918	.....	5,673,707
1919	.....	4,573,969
1920	.....	5,297,987
1921	.....	3,029,332
1922	.....	1,019,671
1922	10,393,865	689,300
1923	11,391,034	704,207
1924	9,914,912	661,298
1925	12,491,377	615,292
1926	15,457,187	701,012
1927	14,829,711	764,312
1928	12,608,121	688,282
1929	16,105,927	900,826

Alcohol, Methyl

(See Methanol)

Alcohol, Other, Pure and Denatured

	*Pounds.	Dollars.
1891	418,935	180,290
1901	237,509	97,633
1913	151,232	58,346
1914	187,845	67,728
1915	200,455	108,985
1916	24,433,243	8,784,742
1917	51,941,634	16,027,867
1918	8,351,142	4,619,878
1919	11,884,383	6,145,115
1920	27,376,167	10,455,247
1921	14,635,394	7,569,881
1922	3,180,013	943,774
1923	404,837	170,155
1924	312,187	213,298
1925	380,959	296,057
1926	473,412	291,016
1927	380,298	405,750
1928	423,336	402,413
1929	2,770,400	379,600

* Quantity stated as "Gallons" prior to 1929.

Aluminum Ingots, Scrap and Alloys

	Pounds.	Dollars.
1918	21,207,641	8,611,447
1919	11,363,094	4,194,099
1920	7,834,746	2,330,073
1921	1,989,569	614,142
1922	1,442,580	282,084
1923	603,377	114,771
1924	1,533,943	317,968
1925	8,880,379	1,984,673
1926	2,296,122	511,867
1927	979,145	197,388
1928	4,506,742	935,967
1929	1,031,962	173,320

Aluminum Sulphate

	Pounds.	Dollars.
1922	26,450,657	388,447
1923	31,692,679	466,810
1924	33,867,103	442,372
1925	35,737,542	437,950
1926	43,732,392	530,966
1927	43,124,766	508,236
1928	42,381,403	503,929
1929	48,761,216	578,327

Ammonia and Compounds

(See also "Fertilizers")

	Pounds.	Dollars.
1922	2,747,480	990,111
1923	8,397,796	1,025,925
1924	3,440,966	899,166
1925	3,880,969	913,476
1926	4,668,581	741,389
1927	4,807,777	613,271
1928	3,762,692	350,983
1929	2,009,277	111,590

Ammonia, Anhydrous

	Pounds.	Dollars.
1928	1,019,567	161,608
1929	2,157,685	366,294

Anilin Oils and Salts

	Pounds.	Dollars.
1922	341,220	65,602
1923	492,087	88,248
1924	262,799	68,970
1925	634,647	133,920
1926	478,737	93,427

Not stated after 1926.

Antitoxins, Serums and Vaccines (Biologics)

		Dollars.
1924	.....	843,588
1925	.....	1,057,124
1926	.....	1,417,564
1926	.....	1,417,564
1927	.....	1,612,466
1928	.....	1,754,390
1929	.....	1,224,826

Asbestos, Unmanufactured

	Tons.	Dollars.
1917	219	21,851
1918	767	117,413
1919	520	58,448
1920	1,079	223,560
1921	711	139,918
1922	329	43,302
1923	185	24,219
1924	1,163	73,580
1925	883	87,576
1926	1,009	76,218
1927	688	60,966
1928	668	249,555
1929	632	213,514

Ashes, Pot and Pearl

	Pounds.	Dollars.
1871	1,474,954	103,249
1881	1,636,839	141,463
1891	430,582	24,432
1901	1,043,817	56,072

Stated as "Potash, All Other," for later years.

Asphalt and Bitumen, Natural, Unmanufactured

	Tons.	Dollars.
1914	49,831	1,131,086
1915	28,553	616,240
1916	42,754	830,946
1917	34,423	712,051
1918	22,065	548,745
1919	22,754	729,662
1920	47,024	1,386,770
1921	43,630	1,290,467
1922	43,002	1,183,080
1923	66,004	1,588,001
1924	50,639	1,270,916
1925	36,866	988,946
1926	34,370	940,170
1927	40,758	1,157,090
1928	22,206	648,671
1929	39,199	1,043,168

Asphalt and Bitumen, Manufactures, Except Roofing

	Pounds.	Dollars.
1914	.....	362,347
1915	.....	400,154
1916	.....	510,299
1917	.....	554,665
1918	.....	489,038
1919	.....	673,231
1920	.....	682,753
1921	.....	781,947
1922	29,514,018	390,925
1923	43,664,167	633,379
1924	66,030,928	1,112,974
1925	90,155,525	1,506,798
1926	67,049,651	1,204,546
1927	55,487,665	1,193,613
1928	51,876,525	970,339
1929	46,389,296	967,646

Baking Powder

	Pounds.	Dollars.
1901	822,540	292,081
1914	2,723,964	790,274
1915	3,376,780	881,879
1916	3,969,985	860,118
1917	4,836,844	1,028,352
1918	6,022,402	1,838,808
1919	4,257,487	1,257,805
1920	5,595,126	1,648,906
1921	3,491,666	1,229,400
1922	3,612,397	1,496,446
1923	4,061,789	1,773,005
1924	3,930,204	1,622,749
1925	4,274,684	1,628,120
1926	4,084,663	1,500,125
1927	4,790,031	1,791,860
1928	5,122,950	1,775,224
1929	5,701,122	1,931,682

Bauxite and Other Aluminum Ores and Concentrates

	Tons.	Dollars.
1915	11,949	531,404
1916	19,317	929,309
1917	18,495	1,118,777
1918	21,313	1,463,842
1919	18,187	1,397,200
1920	20,890	1,709,390
1921	13,081	1,066,732
1922	19,617	961,208
1923	49,234	2,312,344
1924	81,833	3,765,069
1925	78,286	4,042,557
1926	81,877	4,142,048
1927	107,930	6,742,126
1928	122,489	6,964,234
1929	126,952	4,118,566

Beeswax

	Pounds.	Dollars.
1881	164,090	40,203
1891	120,548	30,027
1901	140,276	39,464
1914	96,215	27,292
1915	181,328	57,971
1916	147,772	48,252
1917	383,667	131,691
1918	189,871	68,117
1919	134,508	67,237
1920	641,357	287,051
1921	189,616	80,497
1922	100,674	27,699
1923	79,404	25,187
1924	136,080	42,311

Not stated after 1924.

Benzene (Benzol)

(See "Coaltar Distillates.")

Bleaching Powder

(See "Lime, Chlorinated")

Bones, Hoofs, and Horns, Unmanufactured

	Pounds.	Dollars.
1871	.....	55,629
1881	.....	73,807
1891	.....	335,710
1901	.....	218,680
1913	.....	102,705
1914	.....	61,180
1915	.....	16,182
1916	.....	37,558
1917	.....	39,804
1918	.....	338,642
1919	.....	330,677
1920	.....	374,136
1921	.....	118,021
1922	5,297,306	261,292
1923	6,300,654	310,152
1924	5,457,207	285,664
1925	4,188,698	152,230
1926	2,509,345	108,228
1927	1,974,935	79,766
1928	2,861,068	107,830
1929	1,818,028	74,366

Bone Black

	Pounds.	Dollars.
1922	2,056,598	117,014
1923	2,398,913	147,049
1924	2,914,963	173,901
1925	2,892,136	177,470

Not separately stated after 1925.

Bone Black and Lampblack

	Pounds.	Dollars.
1926	3,194,613	225,737
1927	3,327,498	225,351
1928	3,322,883	192,887
1929	3,751,230	236,314

Borax (Sodium Borate)

	Pounds.	Dollars.
1920	10,943,110	905,617
1921	4,368,880	385,650
1922	10,094,724	545,601
1923	32,400,617	1,375,387
1924	36,475,491	1,611,258
1925	32,527,339	1,482,570
1926	33,277,473	1,519,740
1927	40,772,138	1,509,642
1928	131,614,024	3,689,643
1929	117,945,306	2,494,351

Brushes, Toilet

	*Dozen.	Dollars.
1922	1,143,457	280,362
1923	1,319,516	330,266
1924	2,074,007	458,542
1925	3,199,425	683,371
1926	3,080,797	696,321
1927	258,423	707,316
1928	281,703	735,241
1929	278,172	727,162

* Quantity stated as "Number" prior to 1927.

Brushes, Paint

	*Dozen.	Dollars.
1922	404,767	133,924
1923	629,472	182,428
1924	664,338	228,071
1925	772,234	256,834
1926	814,140	243,304
1927	57,302	191,148
1928	65,386	190,815
1929	79,181	211,501

* Quantity stated as "Number" prior to 1927.

Brushes, Other

	*Dozen.	Dollars.
1915	.....	604,916
1916	.....	1,132,262
1917	.....	863,630
1918	.....	984,085
1919	.....	1,324,367
1920	.....	1,710,678
1921	.....	1,878,901
1922	2,108,151	299,498
1923	2,223,871	343,697
1924	1,933,457	296,046
1925	1,829,933	326,818
1926	2,027,072	375,703
1927	208,680	366,738
1928	163,540	281,972
1929	171,491	270,758

* Quantity stated as "Number" prior to 1927.

Calcium Arsenate

	Pounds.	Dollars.
1928	597,132	36,005
1929	1,760,075	95,385

Calcium Carbide

	Pounds.	Dollars.
1913	33,419,375	999,627
1914	32,845,640	962,040
1915	35,772,867	1,097,952
1916	37,873,692	1,211,267
1917	31,278,971	1,001,861
1918	28,814,176	1,327,864
1919	21,278,167	1,537,984
1920	21,164,404	1,040,754
1921	20,147,753	967,024
1922	12,477,237	629,164
1923	8,551,989	403,428
1924	11,127,322	517,037
1925	6,334,563	271,876
1926	4,406,966	186,649
1927	4,521,361	188,375
1928	4,379,025	187,718
1929	4,177,484	185,586

Calcium Chloride

	Pounds.	Dollars.
1929	20,790,532	242,094

Carbon Black

	Pounds.	Dollars.
1926	41,008,366	3,651,704
1927	47,377,747	4,077,415
1928	65,527,958	5,626,608
1929	87,902,466	7,828,237

Candles

	Pounds.	Dollars.
1871	2,321,959	348,368
1881	1,780,572	210,842
1891	1,546,079	149,112
1901	2,432,815	236,547
1913	2,595,912	246,274
1914	3,047,756	283,018
1915	4,230,026	417,345
1916	6,120,695	575,650
1917	6,576,632	749,369
1918	5,530,017	900,514
1919	9,305,651	1,901,536
1920	7,691,420	1,494,616
1921	3,252,838	708,149
1922	2,161,076	322,491
1923	2,449,163	311,862
1924	1,597,054	239,057
1925	1,329,192	234,677
1926	1,324,601	254,929
1927	1,132,236	244,832
1928	1,157,344	271,036
1929	1,011,862	240,416

Cement, Hydraulic

	Barrels (380 lbs.).	Dollars.
1901	218,240	438,915
1914	2,391,453	2,382,282
1915	2,361,451	3,241,686
1916	2,740,596	3,780,564
1917	2,345,952	4,111,550
1918	2,575,126	5,896,905
1919	1,938,223	5,871,902
1920	3,179,549	9,599,384
1921	2,023,167	7,700,081
1922	1,018,760	3,100,459
1923	1,127,460	3,274,073
1924	962,158	2,770,261
1925	829,342	2,514,423
1926	1,051,843	3,081,975
1927	918,377	3,010,007
1928	786,696	2,717,222
1929	864,069	3,072,856

Exports from the United States

Chalk Manufactures

	Pounds.	Dollars.
1914	.....	40,154
1915	.....	51,175
1916	.....	60,41[illegible]
1917	.....	105,202
1918	.....	186,711
1919	.....	273,741
1920	.....	373,200
1921	.....	467,993
1922	.....	199,640
1922	1,272,354	209,018
1923	1,225,340	150,679
1923	1,253,329	171,656
1924	1,134,506	133,057
1925	1,334,169	172,452
1926	1,630,880	241,174
1927	1,863,526	221,793
1928	1,606,946	234,265
1929	1,532,719	215,848

Chewing Gum

	Pounds.	Dollars.
1901	.....	11,686
1914	.....	178,630
1915	.....	281,433
1916	.....	574,423
1917	.....	1,084,732
1918	.....	1,896,135
1919	.....	1,794,880
1920	.....	2,617,483
1921	.....	1,510,679
1922	1,911,892	892,380
1923	2,474,685	1,185,016
1924	2,899,414	1,358,362
1925	3,762,784	1,675,106
1926	5,035,375	2,198,229
1927	4,904,134	1,935,262
1928	3,004,857	1,344,564
1929	3,341,269	1,490,675

Chlorine Gas

	Pounds.	Dollars.
1928	2,372,548	110,078
1929	6,187,062	249,422

Chrome Colors and Iron Blues

	Pounds.	Dollars.
1929	168,985	17,642

Clays, Fire Clay

	Tons.	Dollars.
1871	.....	10,904
1881	.....	156
1891	.....	.....
1901	.....	2,330
1917	44,098	201,398
1918	50,529	310,527
1919	44,002	296,108
1920	32,076	257,443
1921	45,574	387,926
1922	19,241	131,910
1923	32,781	237,239
1924	44,133	328,258
1925	34,407	315,422
1926	44,733	356,295
1927	42,353	373,811
1928	43,991	396,682
1929	66,808	591,889

Clays, All Other

	Tons.	Dollars.
1871	.....	.....
1881	.....	8,762
1891	.....	26,857
1901	.....	146,131
1917	26,078	169,544
1918	22,293	189,146
1919	23,752	196,943
1920	40,562	440,874
1921	45,505	583,988
1922	17,315	185,714
1923	29,083	307,587
1924	27,711	392,995
1925	32,227	507,328
1926	33,261	518,590
1927	44,852	727,583
1928	47,845	727,295
1929	60,789	1,095,023

Cocoa Butter

	Pounds.	Dollars.
1920	11,048,416	4,401,482
1921	3,170,617	987,534
1922	1,199,969	359,782
1923	956,849	287,026
1924	887,508	232,946
1925	1,576,702	427,170
1926	1,765,584	518,275
1927	289,727	104,337
1928	1,896,922	620,807
1929	1,009,677	315,489

Coaltar and Pitch

	Barrels. (280 lbs.)	Dollars.
1913	121,168	152,273
1914	22,150	43,145
1915	21,317	39,647
1916	74,809	129,220
1917	62,674	145,574
1918	53,955	147,765
1919	60,672	201,653
1920	81,640	192,294
1921	128,103	287,300
1922	76,653	159,078
1923	389,183	1,186,845
1924	406,274	1,581,930
1925	95,319	283,914
1926	90,980	290,730
1927	740,834	3,633,792

Stated separately after 1927.

Coaltar, Crude

	Barrels (280 lbs.).	Dollars.
1928	66,664	253,829
1929	113,104	488,718

Coaltar Pitch and Pitch Cake

	Tons.	Dollars.
1928	30,584	494,841
1929	10,362	138,185

Coaltar Colors, Dyes and Stains N. E. S.

	Pounds.	Dollars.
1922	3,352,437	4,001,145
1923	13,935,567	5,011,825
1924	17,105,265	5,407,652
1925	20,683,472	6,591,543
1926	20,682,072	6,591,747
1926	25,101,464	6,042,748
1927	26,605,220	5,829,412
1928	25,782,028	5,556,030
1929	34,099,779	7,245,577

Coaltar Distillate, Benzol

	*Gallons.	Dollars.
1918	25,400,852	2,152,215
1919	24,402,278	1,236,282
1920	17,253,314	732,536
1921	66,622,862	3,182,721
1922	55,179,363	1,978,776
1923	78,727,250	2,715,609
1924	100,384,912	3,101,983
1925	39,798,083	1,166,374
1926	48,744,643	1,309,646
1926	61,573,213	2,374,753
1927	29,434,714	8,041,548
1928	21,909,487	5,168,769
1929	27,043,747	6,833,231

* Quantity stated as Pounds prior to 1927.

Coaltar Distillates, Other Crude

	Pounds.	Dollars.
1918	.....	5,620,851
1919	.....	3,748,370
1920	.....	3,618,424
1921	.....	4,101,129
1923	5,289,029	154,983
1923	8,160,098	236,405
1924	10,159,483	367,108
1925	16,652,904	488,801
1926	24,919,275	783,740
1927	21,093,192	525,809
1928	13,847,137	412,085
1929	14,798,624	457,657

Coaltar Dyes in Packages for Household Use

	Pounds.	Dollars.
1928	157,967	124,345
1929	290,073	210,327

Coaltar Intermediates, N. E. S.

	Pounds.	Dollars.
1923	1,371,649	273,628
1924	1,802,689	302,710
1925	1,854,442	294,493
1926	1,240,567	250,847
1927	2,459,520	432,270
1928	2,447,00[illegible]	248,763
1929	2,717,509	404,002

Coaltar Medicinals

	Pounds.	Dollars.
1891	.....	1,880,728
1901	.....	3,440,177
1913	.....	7,110,493
1914	.....	6,721,978
1915	.....	7,130,379
1916	.....	8,397,971
1917	.....	8,613,202
1918	.....	10,190,188
1919	.....	15,277,037
1920	.....	20,124,561
1921	.....	18,088,328
1922	564,166	224,546
1923	217,784	138,526
1924	247,562	233,817
1925	504,127	410,257
1926	658,831	409,764
1927	885,729	378,295
1928	593,696	323,130
1929	514,541	228,435

Coaltar Photographic Chemicals

	Pounds.	Dollars.
1922	248,119	103,853
1923	216,011	94,285
1924	183,075	96,661
1925	229,473	81,523
1926	415,128	119,951

Not stated after 1926.

Copper Ores, Concentrates and Unrefined Copper

	Pounds.	Dollars.
1916	4,921,089	1,137,770
1917	18,200,897	5,509,818
1918	26,550,026	6,920,687
1919	1,774,844	483,590
1920	2,929,227	555,615
1921	371,096	85,361
1922	295,935	34,873
1923	260,196	36,111
1924	295,278	50,125
1925	1,401,161	200,408
1926	2,662,245	269,690
1927	6,987,252	762,862
1928	5,161,155	593,202
1929	7,310,284	1,212,306

Copper Sulphate (Blue Vitriol)

	Pounds.	Dollars.
1901	49,223,183	2,324,738
1913	5,052,680	262,561
1914	7,375,775	330,007
1915	10,238,808	445,580
1916	17,978,242	2,469,437
1917	28,128,190	3,012,954
1918	15,164,078	1,431,262
1919	13,223,923	1,339,945
1920	4,511,284	373,834
1921	4,297,378	297,395
1922	4,809,948	227,019
1923	2,535,137	145,305
1924	2,507,827	124,417
1925	4,219,538	199,531
1926	5,760,988	276,238
1927	5,102,717	259,644
1928	8,541,762	429,614
1929	7,325,987	411,296

Cork, Crown Bottle Caps

	Gross.	Dollars.
1925	3,953,435	825,213
1926	4,272,257	870,004
1927	3,839,589	813,135
1928	3,627,428	744,929
1929	3,660,880	749,682

Cork Disks, Washers and Wafers

	Gross.	Dollars.
1922	.....	109,432
1923	2,364,279	131,314
1924	2,573,944	134,282
1925	4,030,787	171,338
1926	5,706,411	203,854
1927	5,006,807	194,635
1928	4,997,686	193,676
1929	4,978,582	199,255

Cork Stoppers

	Pounds.	Dollars.
1922	800,935	123,420
1923	325,247	121,416
1924	467,729	140,418
1925	94,645	59,288
1926	202,803	80,482
1927	192,897	92,[illegible]79
1928	641,614	198,242
1929	630,271	227,383

Cork, Other Manufactures of

	Pounds.	Dollars.
1891	.....	7,103
1901	.....	36,717
1913	.....	339,436
1914	.....	.....
1915	.....	211,795
1916	.....	455,424
1917	.....	541,579
1918	.....	[illegible] 7,377
1919	.....	[illegible] 5,524
1920	.....	[illegible] 40,517
1921	.....	1,757,636
1923	1,611,935	288,494
1924	2,389,261	318,611
1925	2,205,153	280,921
1926	3,093,591	421,606
1927	16,880,430	497,599
1928	3,596,707	492,590
1929	4,289,118	690,886

Creams, Rouges and Other Cosmetics

	Pounds.	Dollars.
1922	2,071,263	966,133
1923	2,077,398	1,032,439
1924	2,355,842	1,213,569
1925	2,179,696	1,140,623
1926	2,601,639	1,441,338
1927	3,046,879	1,745,276
1928	3,231,724	1,774,327
1929	1,423,623	610,360

Crucibles, Clay and Graphite

	Number.	Dollars.
1922	355,155	92,273
1923	370,895	100,331
1924	489,087	120,679
1925	523,135	99,210
1926	463,589	112,357
1927	693,616	139,308
1928	418,404	105,259
1929	568,211	114,873

Dentifrices

	Pounds.	Dollars.
1922	4,026,935	2,403,497
1923	3,946,642	2,540,388
1924	2,609,841	2,430,508
1925	3,404,629	3,098,672
1926	2,045,387	1,876,510
1927	3,556,956	3,172,535

Separately stated after 1927.

Dental Creams

	Pounds.	Dollars.
1928	3,490,952	3,127,309
1929	2,824,392	2,518,685

Dentifrices, All Other

	Pounds.	Dollars.
1928	764,937	399,708
1929	699,824	327,118

Dextrin, or British Gum

	Pounds.	Dollars.
1922	16,241,674	536,027
1923	17,327,297	619,258
1924	20,133,355	795,583
1925	21,076,367	929,149
1926	21,458,176	949,040
1927	23,825,138	978,087
1928	24,674,856	1,002,135
1929	20,782,607	964,460

Distilled Liquors

	Pf. Gallons.	Dollars.
1925	126,302	121,722
1926	212,455	161,118
1927	176,983	84,156
1928	142,418	70,338
1929	301,420	129,330

Drugs, Vegetable, Crude, N. E. S.

	Pounds.	Dollars.
1901	.....	275,150
1913	.....	424,812
1914	.....	513,071
1915	.....	470,090
1916	.....	768,977
1917	.....	852,256
1918	.....	784,514
1919	.....	1,133,855
1920	.....	1,793,064
1921	.....	836,320
1922	3,919,912	878,636
1923	4,235,463	969,861
1924	6,085,687	1,394,113
1925	7,944,567	1,681,474
1926	5,186,427	1,085,328
1927	4,341,209	935,056
1928	5,349,561	1,038,138
1929	4,810,857	980,439

Druggists' Rubber Sundries

	Dollars.
1918	884,245
1919	1,019,170
1920	1,530,326
1921	1,512,852
1922	871,465
1923	813,365
1924	745,490
1925	882,521
1926	971,987
1927	407,578
1928	437,659
1929	439,387

Dyes and Dyestuffs

	Dollars.
1871	655,115
1881	626,749
1891	660,590
1901	394,278
1913	347,656
1914	356,919
1915	1,775,325
1916	5,102,302
1917	11,710,887

Stated separately after 1917; see following classes.

Dyeing and Tanning Materials, Crude

	Tons.	Dollars.
1923	840	74,017
1924	1,657	106,542
1925	5,897	137,349
1926	4,298	78,509
1927	1,538	77,717
1928	2,262	107,359
1929	2,292	79,029

Dye Extracts, Logwood, Including Hematine Crystals

	Pounds.	Dollars.
1918	.....	2,339,480
1919	.....	1,556,023
1920	.....	1,832,231
1921	.....	1,471,040
1922	2,626,103	448,712
1923	2,436,946	364,787
1924	1,336,232	180,720
1925	1,987,168	243,521
1926	1,928,186	200,521
1927	2,407,570	236,870
1928	2,391,116	225,439
1929	1,848,243	189,082

Dye Extracts, All Other

	Pounds.	Dollars.
1918	.....	7,284,110
1919	.....	6,125,394
1920	.....	6,829,937
1921	.....	3,571,309
1922	2,614,110	459,861
1923	2,776,378	393,815
1924	1,649,951	234,820
1925	1,342,439	162,021
1926	1,184,530	126,889
1927	966,442	144,603
1928	1,013,918	107,561
1929	639,855	78,530

Eggs in the Shell

	Doz.	Dollars.
1871	5,017	1,428
1881	80,146	13,776
1891	363,116	64,259
1901	3,692,875	676,232
1918	18,969,167	7,167,184
1919	28,384,783	12,444,345
1920	38,326,986	19,149,536
1921	26,960,098	11,251,081
1922	24,620,050	9,094,018
1923	34,283,515	9,311,157
1924	32,831,528	8,659,198
1925	25,106,741	7,300,263
1926	27,930,637	8,169,266
1927	27,962,022	7,840,234
1928	22,831,678	6,393,662
1929	15,981,797	5,079,071

Eggs and Yolks, Frozen, Dried or Canned

	Pounds.	Dollars.
1901	.....	1,610
1913	.....	67,854
1914	.....	47,968
1915	.....	88,865
1916	.....	216,255
1917	.....	72,491
1918	.....	525,880
1919	.....	341,304
1920	.....	282,198
1921	.....	201,832
1922	.....	130,944
1923	555,227	88,870
1924	488,095	74,918
1925	270,036	36,903
1926	425,595	66,648
1927	456,573	60,519
1928	746,998	140,308
1929	460,162	66,194

Fertilizers, Ammonia Sulphate

	Tons.	Dollars.
1920	17,489	2,264,387
1921	65,915	7,620,130
1922	168,077	8,720,775
1923	144,645	9,805,417
1924	130,902	8,918,536
1925	103,282	5,654,682
1926	143,666	7,989,058
1927	195,766	10,137,340
1928	103,275	4,845,399
1929	104,117	4,817,394

Fertilizers, Guano

	Tons.	Dollars.
1871	1,203	35,000
1881	959	29,581

Not stated for later years.

Fertilizers, Nitrogenous Materials, N. E. S.

	Tons.	Dollars.
1923	10,805	466,229
1924	5,749	339,426
1925	6,114	340,700
1926	6,298	339,834
1927	9,324	572,823
1928	8,547	412,165
1929	17,831	845,244

Fertilizers, Phosphates, Crude

	Tons.	Dollars.
1901	624,966	5,048,393

Stated separately for later years.

Fertilizers, Phosphate High-Grade Hard Rock

	Tons.	Dollars.
1913	494,200	4,942,000
1914	475,335	4,753,350
1915	46,050	460,050
1916	44,330	429,130
1917	14,963	150,505
1918	24,047	174,373
1919	80,834	715,104
1920	351,352	3,884,147
1921	274,953	4,087,512
1922	202,694	2,887,405
1923	183,015	2,236,743
1924	160,072	2,015,567
1925	161,064	2,132,142
1926	133,219	1,960,208
1927	123,260	901,099
1928	111,805	769,148
1929	65,120	446,792

Fertilizers, Phosphate Rock, Land Pebble

	Tons.	Dollars.
1913	777,898	4,577,962
1914	1,000,630	5,857,969
1915	222,472	1,276,759
1916	255,206	1,324,877
1917	178,094	705,251
1918	110,909	456,383
1919	78,027	448,855
1920	395,581	2,991,371
1921	651,749	5,684,516
1922	516,635	3,708,250
1923	558,217	3,265,721
1924	660,447	3,301,329
1925	652,969	3,170,723
1926	730,805	3,466,610

Not stated separately after 1926.

Fertilizers, Phosphate Rock, All Other

	Tons.	Dollars.
1913	794	4,127
1914	1,906	6,516
1915	887	5,888
1916	350	3,058
1917	8,108	255,389
1918	22,626	198,778
1919	30,026	308,653
1920	30,309	419,667
1921	16,862	277,747
1922	6,571	78,847
1923	2,278	24,116
1924	4,936	36,667
1925	16,602	132,743
1926	12,080	90,720

Not stated separately after 1926.

Fertilizers, Phosphate Rock, Land Pebble and Other

	Tons.	Dollars.
1927	659,440	3,293,490
1928	834,799	4,082,341
1929	901,988	4,116,679

Fertilizers, Potash Fertilizer Materials

	Tons.	Dollars.
1929	6,713	263,670

Fertilizers, Prepared Mixtures

	Tons.	Dollars.
1922	14,416	690,972
1923	14,036	601,870
1924	34,129	1,650,391
1925	26,945	1,294,124
1926	31,921	1,387,068
1927	15,877	675,990
1928	24,997	928,039
1929	25,280	1,504,036

Exports from the United States

Fertilizers, Superphosphates (Acid Phosphates)

	Tons.	Dollars.
1917	6,508	67,489
1918	6,155	202,268
1919	51,405	1,548,198
1920	93,432	3,099,855
1921	29,954	1,311,054
1922	14,806	267,739
1923	32,326	404,869
1924	50,285	640,301
1925	63,080	902,632
1926	62,976	961,900
1927	88,780	1,227
1928	104,382	1,725,804
1929	80,637	1,485,352

Fertilizers, All Other

	Tons.	Dollars.
1871	.....	264,837
1881	.....	583,360
1891	231,915	2,182,274
1901	18,760	377,567
1913	74,834	1,875,999
1914	61,601	1,360,903
1915	89,224	2,128,190
1916	124,979	3,580,543
1917	216,222	6,056,887
1918	89,190	4,808,337
1919	106,656	6,384,432
1920	241,215	20,583,984
1921	108,431	5,988,308
1922	41,529	1,539,512
1923	43,988	1,784,529
1924	35,474	1,455,073
1925	48,227	2,110,393
1926	56,161	2,462,459
1927	80,677	3,420,942
1928	100,933	4,368,250
1929	102,281	4,238,787

Ferrovanadium

	Pounds.	Dollars.
1915	755,905	641,792
1916	1,113,076	1,018,121
1917	2,613,387	2,831,669
1918	2,089,347	2,582,670
1919	637,604	770,862
1920	184,250	253,579
1921	450,070	916,147
1922	69,952	84,827
1923	37,440	50,529
1924	74,020	103,544
1925	18,933	24,108

Not stated after 1925.

Fire Extinguishers

	Number.	Dollars.
1917	.....	895,591
1918	.....	1,688,963
1919	.....	1,055,502
1920	.....	887,484
1921	.....	757,572
1922	54,952	272,739
1923	60,226	324,801
1924	50,801	336,402
1925	28,850	242,151
1926	38,112	351,615
1927	29,097	368,696
1928	44,598	310,347
1929	34,713	355,495

Flavoring Extracts and Fruit Juices

	Pounds.	Dollars.
1913	.....	133,990
1914	.....	106,892
1915	.....	136,742
1916	.....	466,914
1917	.....	581,550
1918	.....	1,018,102
1919	.....	949,726
1920	.....	1,425,380
1921	.....	1,236,135
1922	1,310,469	761,284
1923	2,041,506	678,189

Stated separately after 1923.

Flavoring Extracts

	Pounds.	Dollars.
1924	1,550,149	569,392
1925	492,038	387,426
1926	566,329	463,375
1927	640,969	473,598
1928	655,102	576,673
1929	524,321	518,468

Fly Paper and Fly Traps

		Dollars.
1914	.....	217,857
1915	.....	115,921
1916	.....	75,155
1917	.....	77,425
1918	.....	102,979
1919	.....	146,690
1920	.....	245,111
1921	.....	283,455
1922	.....	188,950
1923	.....	167,494
1924	.....	175,327
1925	.....	163,238
1926	.....	197,916
1927	.....	150,076
1928	.....	138,635
1928	.....	78,339

Formaldehyde (Formalin)

	Pounds.	Dollars.
1918	.....	866,038
1919	.....	797,671
1920	.....	2,289,217
1921	.....	1,376,281
1922	1,940,576	209,386
1923	1,593,014	207,056
1924	4,193,065	496,065
1925	2,917,665	312,973
1926	2,534,244	239,522
1927	2,362,953	229,838
1928	2,455,930	202,879
1929	2,428,616	206,455

Fruit Juices and Other Beverages N. E. S.

	Gallons.	Dollars.
1924	241,901	289,610
1925	362,811	500,255
1926	378,552	567,021
1927	512,213	760,853
1928	517,907	833,973
1929	168,151	343,861

Gelatin

	Pounds.	Dollars.
1922	259,230	175,303
1923	309,895	201,071
1924	418,476	279,200
1925	377,265	269,919
1926	380,974	262,287
1927	329,988	209,936
1928	220,691	167,696
1929	244,712	149,359

German Silver

	Pounds.	Dollars.
1913	.....	65,362
1914	.....	38,691
1915	.....	30,090
1916	.....	273,826
1917	.....	410,295
1918	.....	270,703
1919	.....	304,514
1920	.....	426,768
1921	.....	720,343
1922	402,822	121,755
1923	513,754	154,954
1924	341,099	100,310
1925	284,813	80,234
1926	1,483,081	312,026
1927	1,135,314	284,368
1928	1,536,190	372,875
1929	1,272,614	373,415

Ginseng

	Pounds.	Dollars.
1871	114,221	119,385
1881	338,841	561,545
1891	.....	.....
1901	149,069	801,672
1914	224,605	1,832,686
1915	103,184	919,931
1916	256,082	1,597,508
1917	198,483	1,386,208
1918	259,892	1,717,548
1919	281,623	2,057,161
1920	220,970	2,847,900
1921	157,351	1,623,496
1922	189,999	1,605,257
1923	174,693	2,416,752
1924	176,873	2,606,578
1925	140,740	1,980,325
1926	157,151	1,899,569
1927	188,912	2,636,783
1928	201,101	2,713,419
1929	208,798	2,781,108

Glass Bottles, Vials, and Jars

		Dollars.
1914	.....	711,353
1915	.....	772,427
1916	.....	2,168,244
1917	.....	2,435,610
1918	.....	2,671,892
1919	.....	3,671,180
1920	.....	7,935,108
1921	.....	7,848,658
1922	.....	2,359,546
1923	.....	3,108,173
1924	.....	3,152,049
1925	.....	3,006,011
1926	.....	2,768,516
1927	.....	3,216,782
1929	.....	3,548,736

Glassware, Chemical

	Pounds.	Dollars.
1918	.....	153,937
1919	.....	198,033
1920	.....	207,366
1921	.....	294,672
1922	276,599	154,096
1923	206,356	145,988
1924	247,146	181,711
1925	247,474	194,094
1926	225,892	210,801
1927	205,125	191,483
1928	226,197	196,947
1929	248,612	219,773

Glass, Common Window

	Boxes (50 sq. ft.)	Dollars.
1891	.....	11,244
1901	.....	55,286
1913	.....	434,361
1914	.....	311,339
1915	480,288	1,443,113
1916	894,793	3,122,916
1917	942,648	3,483,596
1918	718,443	3,401,120
1919	908,962	6,058,427
1920	682,593	4,494,554
1921	357,578	2,396,185
1921	337,578	2,396,185
1922	25,431	151,100
1923	39,217	215,192
1924	47,781	215,889
1925	34,465	179,559
1926	28,139	154,576
1927	23,861	151,093
1928	19,912	106,130
1929	20,221	109,820

Glass, Other Window and Plate, N. E. S.

	Pounds.	Dollars.
1923	3,207,249	350,391
1924	2,234,935	254,309
1925	2,161,346	226,438
1926	2,548,087	268,593
1927	4,243,815	886,652
1928	3,645,670	394,257
1929	4,538,465	489,080

Glass, Plate, Unsilvered

	Square feet.	Dollars.
1913	165,129	58,830
1914	74,867	35,767
1915	2,730,046	831,727
1916	5,149,512	1,568,181
1917	6,117,955	2,223,329
1918	5,556,719	2,451,918
1919	8,584,758	4,912,896
1920	4,783,766	2,878,628
1921	3,053,579	2,188,104
1922	2,875,223	1,156,617
1923	2,269,796	907,618
1924	1,736,251	614,456
1925	1,536,784	427,909
1926	1,515,843	368,973
1927	675,822	237,600
1928	1,689,178	526,395
1929	2,319,033	745,914

Glucose (Corn Sirup)

	Pounds.	Dollars.
1881	821,937	28,587
1891	58,149,427	1,394,131
1901	204,209,974	3,113,898
1913	156,365,604	3,682,371
1914	162,680,378	3,766,284
1915	125,434,878	3,103,561
1916	148,523,098	3,772,860
1917	170,025,606	5,960,586
1918	80,970,744	4,949,159
1919	118,835,491	6,588,697
1920	219,425,235	13,331,817
1921	125,972,386	5,022,693
1922	258,447,893	6,109,862
1923	156,314,649	4,788,099
1924	141,141,220	4,860,251
1925	136,822,788	5,289,686
1926	165,589,145	5,737,399
1927	138,347,068	4,398,611
1928	139,182,563	4,605,415
1929	115,639,994	4,266,382

Glue of Animal Origin

	Pounds.	Dollars.
1871	81,110	12,316
1881	867,069	59,038
1891	986,552	110,292
1901	2,703,400	254,477
1913	2,544,932	276,619
1914	2,351,770	258,611
1915	2,874,225	298,136
1916	4,946,298	531,329
1917	4,064,231	513,775
1918	4,901,764	837,679
1919	7,283,653	1,432,589
1920	13,039,002	2,186,756
1921	5,977,180	1,147,678
1922	2,708,674	418,759
1923	2,905,059	431,133
1924	2,295,018	369,073
1925	2,431,391	372,084
1926	2,490,584	385,246
1927	2,321,780	359,879
1928	2,358,646	404,474
1929	2,846,173	483,663

Glue, Vegetable

	Pounds.	Dollars
1922	891,860	98,123
1923	715,483	81,872
1924	961,053	90,561
1925	1,016,050	79,161

Not stated after 1925.

Glycerin

	Pounds.	Dollars.
1918	21,045,991	10,587,531
1919	13,018,882	6,833,432
1920	2,257,623	522,611
1921	1,388,194	316,753
1922	3,625,999	508,807
1923	1,691,407	288,177
1924	1,951,393	326,920
1925	1,085,524	202,090
1926	1,220,012	262,081
1927	576,545	150,041
1928	1,788,189	259,541
1929	1,637,719	214,890

Grape Sugar (Corn Sugar)

	Pounds.	Dollars.
1881	12,438,247	422,828
1891	.....	.....
1913	41,783,642	970,025
1914	36,850,496	799,635
1915	33,027,630	781,672
1916	37,863,084	962,101
1917	44,947,709	1,398,145
1918	16,887,557	1,045,512
1919	17,394,892	875,353
1920	25,839,015	1,559,620
1921	15,981,960	836,858
1922	15,534,234	448,244
1923	6,378,736	225,511
1924	6,909,709	296,167
1925	2,753,957	119,568
1926	4,552,385	154,415
1927	10,442,493	353,320
1928	6,767,843	226,920
1929	7,726,252	286,688

Greases, Lubricating

	Pounds.	Dollars
1914	.....	2,394,918
1915	.....	2,384,396
1916	.....	3,994,436
1917	.....	2,816,958
1918	.....	2,986,815
1919	.....	4,710,484
1920	.....	6,157,323
1921	.....	6,851,936
1922	58,075,940	3,148,916
1923	69,669,600	3,659,805
1924	89,144,864	4,661,237
1925	94,835,439	5,152,121
1926	96,248,414	5,252,138
1927	96,480,422	5,176,816
1928	105,382,468	5,429,762
1929	112,843,842	5,934,033

Greases, Oils and Fats, Animal, N.E.S.

	Pounds.	Dollars.
1881	.....	725,321
1891	.....	2,038,886
1901	.....	3,339,948
1914	.....	5,046,959
1915	.....	4,266,007
1916	.....	3,156,568
1917	.....	3,405,227
1918	.....	2,612,488
1919	.....	2,981,497
1920	.....	3,994,603
1921	.....	4,602,801
1922	65,606,527	4,486,761
1923	51,809,812	4,256,831
1924	78,761,951	6,743,279
1925	85,609,273	9,115,236
1926	64,652,403	7,096,524
1927	89,322,336	8,128,890
1928	69,408,919	6,233,915
1929	59,905,658	5,538,949

Grease Stearin

	Pounds.	Dollars.
1922	3,406,737	277,215
1923	2,962,357	278,101
1924	4,096,531	382,242
1925	2,412,212	256,451
1926	2,555,973	291,614
1927	3,404,998	357,649
1928	1,748,639	156,459
1929	1,837,694	165,439

Gums and Resins, N. E. S.

	Pounds.	Dollars.
1922	1,657,680	367,760
1923	2,159,671	590,079
1924	1,843,093	634,695
1925	2,563,137	886,578
1926	2,886,166	874,397
1927	3,184,895	901,884
1928	4,813,450	1,440,768
1929	4,529,824	1,208,705

Gypsum or Plaster, Crude, Ground, Calcined and Manufactures

	Pounds.	Dollars.
1923	15,619,159	194,890
1924	19,704,383	290,748
1925	25,823,069	394,024
1926	39,061,299	601,722
1927	50,609,967	657,858

Stated separately after 1927.

Gypsum, Crude, Crushed or Ground

	Tons.	Dollars.
1928	1,507	16,513
1929	2,756	24,996

Gypsum Plaster, Calcined and Manufactures of

	Pounds.	Dollars.
1928	26,863,606	327,520
1929	42,964,108	469,027

Honey

	Pounds.	Dollars.
1871	.....	2,479
1881	.....	109,007
1891	.....	83,325
1901	.....	55,574
1914	.....	135,660
1915	.....	114,038
1916	.....	252,487
1917	.....	736,139
1918	16,090,672	2,509,570
1919	10,368,342	2,422,454
1920	3,659,198	655,482
1921	1,112,015	182,616
1922	2,406,922	261,899
1923	2,891,478	290,067
1924	1,921,815	228,237
1925	6,213,645	649,732
1926	4,074,590	433,768
1927	11,206,999	970,998
1928	9,943,615	902,708
1929	11,805,816	1,032,274

Hops

	Pounds.	Dollars.
1871	3,273,653	316,288
1881	8,990,655	2,016,970
1891	8,736,080	2,327,474
1901	14,963,676	2,466,516
1914	24,262,896	6,953,529
1915	16,210,443	3,948,020
1916	22,409,818	4,383,929
1917	4,824,876	773,926
1918	3,494,579	993,773
1919	7,466,952	2,333,850
1920	30,779,508	17,716,222
1921	22,206,028	10,873,263
1922	19,521,877	4,851,623
1923	13,497,184	2,589,659
1924	20,460,707	6,501,247
1925	16,121,978	3,257,404
1926	14,997,974	3,794,080
1927	13,369,263	3,465,159
1928	11,812,434	2,877,935
1929	8,836,240	1,826,575

Hydrogen Peroxide (Dioxide)

	Pounds.	Dollars.
1929	1,117,202	195,567

Infants' Food, Malted Milk, Etc.

	Pounds.	Dollars.
1918	.....	1,908,384
1919	.....	2,459,635
1920	.....	3,032,330
1921	.....	1,520,259
1922	2,480,589	720,587
1923	2,185,043	644,878
1924	1,820,291	542,481
1925	2,468,632	651,824
1926	2,516,987	684,414
1927	2,745,713	743,456
1928	2,473,675	673,550
1929	1,832,830	570,454

Ink, Printing and Lithographic

	Pounds.	Dollars.
1901	.....	171,758
1915	.....	384,847
1916	.....	682,165
1917	.....	751,411
1918	.....	882,062
1919	.....	1,644,029
1920	.....	1,590,096
1921	.....	1,550,548
1922	8,655,372	993,352
1923	9,580,183	1,167,260
1924	10,132,580	1,305,758
1925	11,041,545	1,244,617
1926	11,005,826	1,450,796
1927	10,741,121	1,326,530
1928	11,119,392	1,370,008
1929	12,021,439	1,542,220

Ink, Writing

		Dollars.
1921	.....	203,947
1922	.....	357,909
1923	.....	241,424
1924	.....	234,795
1925	.....	232,387
1926	.....	240,799
1927	.....	188,711
1928	.....	227,545
1929	.....	355,479

Ink, All Other

	Pounds.	Dollars.
1871	.....	12,158
1881	.....	8,449
1891	.....	122,235
1901	.....	119,467
1915	.....	154,874
1916	.....	285,277
1917	.....	377,446
1918	.....	407,004
1919	.....	726,204
1920	.....	836,436
1921	.....	774,423
1922	389,124	125,031
1923	553,280	161,007
1924	519,218	198,461
1925	322,533	164,026
1926	516,947	201,432
1927	683,020	260,728
1928	795,397	289,713
1929	700,130	289,751

Insecticides, Fungicides, Etc.—Agricultural N. E. S.

	Pounds.	Dollars.
1927	1,933,673	240,641
1928	5,993,913	572,569
1929	5,892,237	737,855

Insecticides, Disinfectants, Etc.—Household

	Pounds.	Dollars.
1927	7,945,659	1,976,012
1928	16,115,613	3,876,804
1929	6,507,039	1,808,984

Instruments, Medical and Surgical

		Dollars.
1913	.....	222,650
1914	.....	206,421
1915	.....	560,741
1916	.....	355,170
1917	.....	516,355
1918	.....	671,250
1919	.....	860,179
1920	.....	743,111
1921	.....	802,769
1922	.....	288,864
1923	.....	272,563
1924	.....	283,022
1925	.....	350,260
1926	.....	435,692
1927	.....	528,178
1928	.....	524,833
1929	.....	481,675

Exports from the United States

Instruments, Optical

		Dollars.
1915	.....	1,018,016
1916	.....	2,593,509
1917	.....	2,945,920
1918	.....	1,073,339
1919	.....	1,209,911
1920	.....	1,465,265
1921	.....	1,158,559
1922	.....	798,270
1928	.....	772,243

Not stated after 1923.

Iron, Pig, Ferromanganese and Spiegeleisen

	Tons.	Dollars.
1901	16	1,296
1918	4,935	1,054,548
1919	2,184	448,899
1920	2,374	354,570
1921	3,335	688,369
1922	1,021	79,195
1923	3,594	131,812
1924	4,120	131,403
1925	4,204	111 739
1926	1,694	67,758
1927	706	49,239
1928	6,209	155,282
1929	5,592	155,420

Iron, Pig, Ferrosilicon

	Tons.	Dollars.
1918	8,599	917,686
1919	3,712	378,523
1920	398	24,578
1921	577	36,725
1922	463	23,493
1923	931	38,968
1924	1,031	36,459

Not stated after 1924.

Kalsomine or Cold Water Paints

	Pounds.	Dollars.
1929	3,537,144	180,281

Lacquers

	Gallons.	Dollars.
1928	265,920	609,103
1929	290,814	826,188

Lampblack

	Pounds.	Dollars
1871	.....	25,980
1881	.....	51,682
1891	.....	.....
1901	.....	.....
1913	.....	505 748
1914	.....	421,548
1915	.....	368,825
1916	.....	521,463
1917	.....	917,303
1918	.....	1,111,265
1919	.....	1,102,767
1920	.....	1,959,208
1921	.....	1,829,987
1922	17,062,311	2,028,105
1923	18,157,775	2,730,565
1924	37,563,672	4,929,142
1925	35,302,783	4,058,759

Not stated separately after 1925.

Lard

	Pounds.	Dollars.
1871	80,037,297	10,563,010
1881	378,142,496	35,226,575
1891	498,343,927	34,414,323
1901	611,357,514	46,560,148
1913	519,025,384	58,187,336
1914	481,457,792	54,402,911
1915	475,531,908	52,440,133
1916	427,011,338	47,634,376
1917	444,769,540	77,608,913
1918	392,506,355	98,216,836
1919	724,771,383	210,175,908
1920	587,224,549	171,523,351
1921	746,157,356	131,329,199
1922	766,950,103	91,484,669
1923	952,641,705	116,593,907
1924	1,014,898,388	129,090,796
1925	792,735,441	123,223,066
1926	695,445,258	114,470,609
1927	675,812,466	96,836,680
1928	716,397,788	94,545,639
1929	780,914,185	101,971,464

Lard, Neutral

	Pounds.	Dollars.
1913	44,777,692	5,129,899
1914	29,323,786	3,270,236
1915	26,021,054	3,022,321
1916	34,426,590	4,050,397
1917	17,576,240	3,168,089
1918	4,258,529	1,074,603
1919	17,395,888	5,392,710
1920	23,202,027	6,916,279
1921	22,544,303	4,159,296
1922	20,497,006	2,586,703
1923	26,494,079	3,424,413
1924	24,238,981	3,241,682
1925	20,420,916	3,521,178
1926	20,131,967	3,642,511
1927	20,056,556	3,135,267
1928	23,799,064	3,309,170
1929	18,315,438	2,493,525

Lard Compounds Containing Animal Fats

	Pounds.	Dollars.
1901	23,359,966	1,449,878
1913	67,456,832	5,915,759
1914	58,303,564	5,489,139
1915	69,980,614	6,045,752
1916	52,843,311	5,147,434
1917	56,350,393	8,269,844
1918	31,273,382	6,633,640
1919	128,157,327	31,138,158
1920	44,195,842	11,850,311
1921	42,155,971	6,099,914
1923	11,139,730	1,397,222
1924	6,907,366	935,340
1925	8,922,451	1,296,373
1926	14,957,990	2,151,325
1927	10,547,617	1,316,408
1928	5,653,600	739,705
1929	4,137,760	528,819

Lard Compounds and Other Substitutes for Lard, Vegetable

	Pounds.	Dollars.
1922	25,478,494	2,988,705
1923	17,983,588	2,221,343
1924	7,029,296	992,560
1925	6,578,444	976,128
1926	8,599,874	1,266,221
1927	6,802,008	915,843
1928	5,245,858	711,312
1929	5,997,029	818,924

Lead Arsenate

	Pounds.	Dollars.
1928	698,533	84,644
1929	1,413,500	182,104

Lead Pigs and Bars

	Pounds.	Dollars.
1901	6,354,924	285,158
1914	40,323,662	1,511,800
1915	193,024,221	7,926,604

Stated as following classes after 1915.

Lead Pigs and Bars, from Domestic Ore

	Pounds.	Dollars.
1916	153,941,629	9,190,302
1917	159,673,425	11,721,920
1918	129,954,274	10,390,928
1919	32,488,910	2,360,495
1920	8,132,608	610,728
1921	2,702,864	225,414
1922	8,787,906	434,965
1923	7,597,684	454,446
1924	5,984,462	379,683
1925	9,597,566	696,649
1926	13,589,757	994,856
1927	4,063,583	284,340
1928	8,359,552	409,556
1929	53,928,836	2,603,793

Lead Pigs and Bars, from Foreign Ore

	Pounds.	Dollars.
1916	52,265,948	2,114,692
1917	28,254,508	2,108,150
1918	84,260,273	6,965,492
1919	117,378,386	7,879,527
1920	61,648,426	3,596,098
1921	18,896,711	1,049,265
1922	74,685,868	3,472,574
1923	50,995,359	2,795,920
1924	114,281,919	6,191,380
1925	221,468,691	15,494,069
1926	130,296,781	9,369,435
1927	173,096,429	10,445,002
1928	240,934,121	11,067,755
1929	150,910,629	6,934,413

Lime

	Barrels (200 lbs.).	Dollars.
1901	28,487	29,562
1913	284,685	214,543
1914	285,749	200,437
1915	169,078	117,644
1916	258,538	143,182
1917	168,521	126,266
1918	142,525	150,197
1919	65,015	108,647
1920	54,424	111,162
1921	64,568	143,068
1922	54,179	87,386
1923	110,142	152,671
1924	129,394	194,613
1925	143,686	195,757
1926	142,942	216,898
1927	150,161	206,408
1928	157,558	214,667
1929	189,726	262,801

Lime Acetate

	Pounds.	Dollars.
1901	61,291,544	1,101,037
1913	80,579,535	2,221,427
1914	68,160,224	1,560,935
1915	24,673,247	486,405
1916	18,804,972	961,645
1917	12,959,222	607,847
1918	15,490,032	797,996
1919	9,369,940	401,476
1920	32,885,132	827,096
1921	12,845,700	350,635
1922	27,606,499	587,174
1923	26,134,454	797,338
1924	17,823,560	643,116
1925	21,288,742	640,807
1926	21,783,051	688,501
1927	16,127,622	582,683
1928	13,017,791	416,939
1929	3,550,173	128,563

Lime, Chlorinated (Bleaching Powder)

	Pounds.	Dollars.
1918	13,060,401	558,066
1919	15,639,918	450,145
1920	31,232,379	840,092
1921	37,425,093	1,146,378
1922	26,439,251	502,870
1923	40,651,029	681,287
1924	23,576,021	438,445
1925	25,780,879	439,694
1926	22,345,324	408,852
1927	18,371,826	341,880
1928	21,182,777	365,234
1929	12,726,042	249,281

Lithopone

	Pounds.	Dollars.
1922	8,231,722	169,982
1923	3,317,969	178,785
1924	2,110,429	129,440
1925	2,020,462	109,040
1926	3,119,011	161,883
1927	4,129,235	213,265
1928	5,313,143	275,054
1929	8,457,367	433,854

Lye

	Pounds.	Dollars.
1929	674,765	31,504

Magnesia, Milk of

	Pounds.	Dollars.
1929	296,208	127,054

Magnesia and Manufactures

	Pounds.	Dollars.
1922	3,831,681	223,686
1923	5,332,096	298,996
1924	4,077,834	285,859
1925	3,889,563	258,041
1926	6,160,702	339,680
1927	6,359,338	327,316
1928	5,324,933	298,291
1929	6,252,864	404,024

Magnesium Salts

	Pounds.	Dollars.
1929	263,578	12,662

Matches

	Pounds.	Dollars.
1871	.....	183,829
1881	.....	112,167
1891	.....	73,220
1901	.....	88,739
1917	.....	430,650
1918	.....	471,385
1919	.....	572,481
1920	.....	558,911
1921	.....	389,064
1922	1,184,648	217,821
1923	1,231,741	234,436
1924	1,154,001	195,558
1925	990,394	175,707
1926	777,511	142,396
1927	564,527	87,815
1928	875,665	111,031
1929	1,111,207	148,973

Methanol, Pure and Denaturing Grades

	Gallons.	Dollars.
1901	919,504	476,582
1913	1,837,173	788,143
1914	1,598,776	652,486
1915	944,374	438,846
1916	1,472,258	857,161
1917	825,334	646,939
1918	2,588,001	2,070,026
1919	1,339,204	1,299,340
1920	687,008	775,117
1921	467,763	1,031,686
1922	737,050	566,445
1923	1,207,023	1,275,284
1924	640,637	686,911
1925	527,429	523,942
1926	409,210	290,109
1927	281,348	241,002
1928	497,459	347,394
1929	432,246	369,210

Mica and Manufactures

	Pounds.	Dollars.
1917	.....	58,651
1918	.....	71,285
1919	.....	79,581
1920	.....	155,918
1921	.....	305,345
1922	1,134,397	129,186
1923	1,527,753	145,432
1924	1,407,561	178,579
1925	2,133,693	164,240
1926	2,148,725	220,908
1927	2,841,742	216,138
1928	2,664,402	222,710
1929	4,915,978	264,862

Mucilage

		Dollars.
1901	.....	8,907
1913	.....	26,238
1914	.....	26,182
1915	.....	14,504
1916	.....	30,149

Included in following class after 1916.

Mucilage and Paste

	Pounds.	Dollars.
1917	.....	337,125
1918	.....	400,813
1919	.....	469,231
1920	.....	659,727
1921	.....	602,263
1922	2,305,354	261,565
1923	2,742,807	304,845
1924	2,302,250	257,538
1925	2,605,048	285,994
1926	3,819,147	449,196
1927	3,273,872	336,321
1928	3,485,949	332,866
1929	3,382,259	364,666

Naphthalene

	Pounds.	Dollars.
1922	109,514	12,657
1923	95,164	10,386
1924	112,196	13,217

Not stated after 1924.

Nickel Oxide and Matte

	Pounds.	Dollars.
1901	5,990,676	1,510,508
1915	29,599,612	11,110,699
1916	25,649,995	9,876,403
1917	31,005,606	12,270,854
1918	18,818,212	7,680,502
1919	10,011,826	3,980,036
1920	2,392,614	1,144,083
1921	131,088	56,555
1922	9,897,775	1,147,993
1923	306,000	26,642

Not stated after 1923.

Nickel Salts

	Pounds.	Dollars.
1929	32,512	5,041

Nicotine Sulphate

	Pounds.	Dollars.
1928	892,358	268,866
1929	186,207	162,841

Oilcake, Coconut

	Pounds.	Dollars.
1920	224,313	6,404
1921	473,542	11,353
1922	7,960,197	106,057
1923	1,577,940	35,328
1924	2,310,620	48,447

Not stated after 1924.

Oilcake, Corn

	Pounds.	Dollars.
1901	12,703,209	131,774
1913	76,262,845	1,131,330
1914	59,030,623	909,407
1915	45,026,125	798,206
1916	18,996,490	297,041
1917	15,757,612	289,547
1918	457,584	10,246
1919	562,300	16,193
1920	510,809	15,216
1921	1,794,653	29,989
1922	1,767,689	31,097
1923	15,746	502

Not stated after 1923.

Oilcake, Cottonseed

	*Tons.	Dollars.
1901	1,258,687,317	13,119,968
1913	1,128,092,367	15,225,798
1914	799,974,252	11,007,441
1915	1,222,699,889	15,432,126
1916	980,664,572	14,749,489
1917	864,862,375	15,059,920
1918	11,045,263	213,542
1919	179,148,955	5,286,428
1920	338,927,893	11,951,112
1921	359,886,856	7,304,118
1922	331,311,165	7,066,212
1923	342,544,194	7,789,075
1924	200,927,154	4,261,315
1925	593,663,417	12,522,746
1926	506,582,450	9,865,525
1927	599,447,753	9,322,013
1928	527,023,148	11,028,555
1929	176,454	8,765,709

* Quantity stated in pounds prior to 1929.

Oilcake, Linseed

	*Tons.	Dollars.
1918	126,184,029	3,210,734
1919	161,088,337	4,753,170
1920	316,496,323	12,015,139
1921	373,079,051	9,624,882
1922	422,865,573	9,524,980
1923	536,555,238	11,577,111
1924	546,847,552	11,221,023
1925	671,460,032	14,982,348
1926	577,907,698	12,744,953
1927	609,520,259	12,423,480
1928	589,173,158	12,888,620
1929	278,979	15,130,375

* Quantity stated in pounds prior to 1929.

Oilcake, Peanut

	Pounds.	Dollars.
1922	14,513,060	154,565
1923	672,000	11,760

Not stated after 1923.

Oilcake, all Other

	*Tons.	Dollars.
1922	3,172,090	55,161
1923	3,091,352	65,643
1924	1,291,612	22,253
1925	15,249,978	240,380
1926	13,344,088	210,323
1927	20,555,741	290,583
1928	22,569,751	406,010
1929	23,824	979,443

* Quantity stated in pounds prior to 1929.

Oilcake and Meal, Flaxseed or Linseed

	Pounds.	Dollars.
1901	455,154,860	5,471,980
1913	838,119,654	12,982,423
1914	662,868,639	9,650,379
1915	524,794,434	9,048,061
1916	640,916,204	11,935,130
1917	536,976,419	10,255,355

Subdivided after 1917.

Oilcake and Meal, All Other

	Pounds.	Dollars.
1871	203,587,040	4,160,021
1881	448,559,413	6,284,364
1891	633,344,851	7,452,094
1913	6,886,270	104,701
1914	8,484,936	100,445
1915	9,900,878	126,414
1916	28,876,367	410,166
1917	21,558,676	398,681
1918	4,865,602	104,865
1919	60,444,481	1,320,674
1920	60,138,141	1,983,802
1921	9,373,533	234,330

Stated separately after 1921.

Oilcake Meal, Cottonseed

	*Tons.	Dollars.
1915	256,365,126	3,474,244
1916	77,256,997	1,149,478
1917	285,297,316	5,221,091
1918	33,635,530	770,192
1919	132,477,150	3,628,074
1920	110,644,890	3,933,800
1921	94,713,965	1,858,061
1922	117,656,019	2,416,446
1923	111,805,810	2,302,170
1924	49,439,121	1,032,627
1925	291,711,396	6,208,352
1926	209,922,241	4,188,327
1927	391,067,817	6,157,509
1928	137,500,303	2,891,402
1929	79,203	3,905,691

* Quantity stated in pounds prior to 1929.

Oilcake Meal, Linseed

	*Tons.	Dollars.
1918	25,215,948	684,614
1919	41,699,626	1,164,396
1920	19,839,589	705,663
1921	18,184,807	449,993
1922	17,997,571	404,906
1923	38,057,227	840,615
1924	13,266,487	276,426
1925	19,666,051	439,496
1926	11,258,556	253,912
1927	15,600,727	314,421
1928	17,130,705	378,734
1929	9,382	479,607

* Quantity stated in pounds prior to 1929.

Oilcake Meal, all Other

	*Tons.	Dollars.
1922	9,058,338	138,170
1923	2,732,116	53,542
1924	5,322,296	103,526
1925	25,581,764	496,192
1926	4,904,980	96,420
1927	2,882,729	49,351
1928	2,126,952	43,744
1929	3,273	160,076

* Quantity stated in pounds prior to 1929.

Oil, Animal, Lard

	*Pounds.	Dollars.
1871	147,802	153,850
1881	836,255	558,576
1891	1,092,448	562,986
1901	766,783	438,645
1913	154,983	113,665
1914	110.199	87,364
1915	184,019	111,637
1916	421,969	309,836
1917	329,244	321,721
1918	91,585	126,672
1919	82,470	124,887
1920	124,231	195,252
1921	669,772	87,438
1922	699,791	80,043
1923	736,990	88,774
1924	714,816	80,570

* Quantity stated in gallons prior is 1921.

Not stated after 1924.

Oil, Animal, Neat's-foot

	Pounds.	Dollars.
1922	1,147,511	175,375
1923	1,233,304	187,793
1924	1,348,991	235,116
1925	1,694,825	256,673
1926	1,301,297	231,432
1927	1,350,376	217,659
1928	1,362,513	223,219
1929	1,165,108	205,955

Oil, Animal, Not Otherwise Specified

	*Pounds.	Dollars.
1871	80	137
1881	77,496	60,359
1891	512,253	317,594
1901	640,816	286,782
1913	1,603.325	970,717
1914	891,035	609,294
1915	559,197	405,635
1916	655,587	492,964
1917	416,216	378,294
1918	329,576	409,466
1919	1,422,344	2,023,190
1920	1,452,489	2,055,883
1921	2,502,467	393,252
1923	1,183,475	117,992
1924	3,075,501	300,332
1925	1,944,792	250,200
1926	1,404,338	188,885
1927	896,505	96,415
1928	644.964	77,209
1929	890,993	95,006

* Quantity stated in gallons prior to 1921.

Oil, Animal, Oleo

	Pounds.	Dollars.
1891	80,231,035	7,859,130
1901	161,651,413	11,846,373
1913	92,849,757	10,866,253
1914	97,017,065	10,156,665
1915	80,481,496	9,341,188
1916	102,645,914	12,519,115
1917	67,110,111	11,065,019
1918	56,603,388	12,152,787
1919	59,292,322	15,670,854
1920	74,529,494	21,153,000
1921	106,414,800	15,211,998
1922	109,386,571	11,464,837
1923	104,956,378	12,067,689
1924	92,965,001	11,357,628
1925	105,145,483	11,357,628
1926	90,409,613	11,652,995
1927	92,719,505	10,588,880
1928	64,850,998	9,003,322
1929	63,186,612	7,485,262

Exports from the United States

Oil, Animal, Whale

	Pounds.	Dollars.
1922	583,270	53,061
1923	722,530	31,138
1924	92,614	11,570
1923	422,316	19,331
1924	668,173	27,987

Not stated after 1924.

Oil, Castor

	Gallons.	Dollars.
1929	43,217	78,366

Oil, Coconut

	Pounds.	Dollars.
1920	141,088,048	28,968,689
1921	6,639,055	886,574
1922	12,972,264	1,071,924
1923	12,992,853	1,088,027
1924	19,422,637	1,675,544
1925	17,889,820	1,678,511
1926	15,443,814	1,554,592
1927	19,826,137	1,787,792
1928	22,357,823	1,953,251
1929	24,556,017	2,053,141

Oil, Cod and Codliver

	Pounds.	Dollars.
1922	548,892	70,581
1923	323,393	64,145
1924	255,669	62,362

Not stated for 1925-1928; see "Oil, Fish, Codliver."

Oil, Corn

	Pounds.	Dollars.
1901	28,851,270	1,831,980
1913	19,739,622	1,292,009
1914	18,281,576	1,307,204
1915	17,789,635	1,302,159
1916	8,967,826	770,076
1917	8,779,760	998,105
1918	1,831,114	306,219
1919	1,095,414	227,727
1920	12,482,679	2,954,637
1921	6,919,170	1,063,106
1922	5,732,993	678,180
1923	4,361,160	558,834
1924	3,678,608	495,777
1923	5,223,644	651,422
1924	4,195,988	540,333
1925	3,586,458	490,617
1926	2,927,111	408,239
1927	404,732	50,225
1928	328,668	43,525
1929	323,161	47,365

Oil, Cottonseed

	Pounds.	Dollars.
1871	.....	140,577
*1881	3,444,084	1,465,255
*1891	11,003,160	3,975,305
*1901	49,356,741	16,541,321
1913	315,232,892	20,736,972
1914	192,963,079	13,843,179
1915	318,366,525	21,872,940
1916	266,529,960	22,659,800
1917	158,911,767	19,878,325
1918	100,779,981	18,309,854
1919	178,709,033	36,970,545
1920	159,400,618	36,220,529
1921	283,268,025	31,392,838

* "Gallons." Stated separately after 1921.

Oil, Cottonseed, Crude

	Pounds.	Dollars.
1922	31,712,143	2,508,696
1923	25,933,401	2,258,361
1924	23,533,427	2,214,972
1925	24,062,177	2,243,432
1926	36,636,645	3,378,975
1927	38,321,294	2,926,929
1928	50,817,695	4,343,766
1929	20,709,175	1,767,312

Oil, Cottonseed, Refined

	Pounds.	Dollars.
1922	43,590,678	4,778,446
1923	38,358,468	4,238,709
1924	15,884,115	1,866,237
1925	29,198,439	3,508,066
1926	22,378,576	2,702,830
1927	19,258,851	2,033,538
1928	10,652,652	1,218,126
1929	8,822,083	1,044,235

Oil, Fish, Codliver

	Gallons.	Dollars.
1929	25,658	68,579

Oil, Fish, Other

	*Pounds.	Dollars.
1871	1,402,016	1,145,406
1881	912,380	532,839
1891	1,407,321	401,203
1901	991,870	293,004
1913	1,901,953	501,227
1914	448,366	125,575
1915	88,880	29,802
1916	146,643	69,411
1917	123,848	81,556
1918	455,629	446,589
1919	282,855	365,823
1920	1,310,478	1,172,624
1921	118,261	122,027
1922	4,697,895	195,071
1923	3,503,275	172,558
1924	774,987	80,903
1925	726,178	121,574
1926	538,319	103,728
1927	935,032	112,339
1928	864,981	103,070
1929	759,445	77,950

* Quantity stated in gallons prior to 1922.

Oil, Linseed

	*Pounds.	Dollars.
1871	37,841	35,962
1881	72,190	48,479
1891	76,789	48,267
1901	99,919	66,653
1913	1,733,925	874,461
1914	239,198	134,540
1915	1,212,133	660,089
1916	714,120	479,230
1917	1,201,554	1,117,895
1918	1,187,850	1,532,307
1919	1,096,304	1,805,291
1920	1,136,585	2,086,292
1921	4,209,577	719,414
1922	2,702,634	332,781
1923	3,105,089	410,104
1924	2,628,255	346,518
1925	2,404,821	338,092
1926	2,334,867	311,340
1927	2,738,491	270,764
1928	2,221,196	259,829
1929	2,019,835	230,172

* Quantity stated in gallons prior to 1921.

Oil, Mineral, Fuel or Bunker Oil, Laden on Vessels Engaged in Foreign Trade

	Barrels.	Dollars.
1915	2,898,393	2,567,017
1916	4,532,822	4,195,803
1917	5,924,460	6,418,474
1918	5,954,448	8,858,880
1919	8,648,967	17,308,722
1920	19,857,307	43,604,177
1921	28,903,722	72,130,004
1922	29,120,537	49,841,883
1923	34,477,720	45,856,007
1924	39,762,794	54,458,168
1925	44,449,884	65,731,170
1926	43,458,119	65,591,522
1927	48,552,270	73,546,702
1928	31,315,564	68,222,629
1929	51,489,675	54,756,821

Oil, Mineral, Gas and Fuel

	*Barrels. (42 gals.).	Dollars.
1914	475,143,205	13,747,863
1915	672,931,878	18,543,976
1916	897,853,433	24,770,296
1917	1,040,671,713	32,329,617
1918	1,223,283,641	61,137,607
1919	898,044,039	49,918,288
1920	685,738,142	38,195,061
1921	861,934,328	59,237,822
1922	740,196,772	32,099,290
1923	937,243,885	26,687,604
1924	1,361,122,655	41,613,640
1925	1,433,542,658	52,046,697
1926	1,381,540,720	44,916,778
1927	38,934,219	49,799,788
1928	44,080,759	48,643,619
1929	36,210,022	38,737,095

* Quantity stated in gallons prior to 1927.

Oil, Mineral, Gasoline, Naphtha and Other Light Products

	*Barrels. (42 gals.).	Dollars.
1871	7,209,592	746,797
1881	17,292,310	1,693,975
1891	12,171,147	993,056
1901	17,834,254	1,535,608
1913	101,821,572	14,269,878
1914	40,840,730	5,653,210
1915	94,335,128	10,296,928
1916	194,644,803	29,472,233
1917	199,563,352	41,057,840
1918	209,029,477	52,739,227
1919	146,301,861	38,654,419
1920	184,761,512	50,537,352
1921	259,603,571	77,415,408
1922	550,478,181	117,630,281
1923	674,716,726	134,165,991
1924	1,035,875,520	151,175,341
1925	1,217,930,141	175,158,381
1926	1,589,551,815	239,066,839
1927	42,841,426	246,142,953
1928	46,507,584	196,569,999
1929	54,804,921	255,116,580

* Quantity stated in Gallons, 1913 to 1927.

Oil, Mineral, Illuminating (Kerosene)

	*Barrels. (42 gals.).	Dollars.
1871	133,007,177	31,309,780
1881	332,283,045	34,317,695
1891	571,119,805	40,221,201
1901	781,207,105	51,477,267
1913	1,048,894,297	66,189,265
1914	1,157,283,310	74,500,162
1915	886,316,740	53,607,082
1916	823,164,882	54,288,788
1917	833,969,012	642,377
1918	528,217,669	47,261,782
1919	725,686,746	81,495,706
1920	915,138,071	126,392,949
1921	833,194,727	128,089,900
1922	807,701,055	76,389,046
1923	854,563,611	81,976,661
1924	882,602,874	80,516,405
1925	892,267,121	85,433,981
1926	886,111,373	87,886,209
1927	21,249,245	96,269,835
1928	21,172,754	84,112,154
1929	20,795,335	90,637,160

* Quantity stated in Gallons prior to 1927.

Oil, Mineral, Insulating, or Transformer

	Gallons.	Dollars.
1927	3,270,417	1,018,827
1928	3,159,963	885,316
1929	4,844,596	1,279,988

Oil, Mineral, Lubricating, All Other

	Gallons.	Dollars.
1918	259,385,874	64,030,825
1919	265,552,016	84,982,874
1920	329,288,894	110,539,083
1921	332,274,197	136,495,631
1922	307,794,350	75,113,214

Stated separately after 1922.

Oil, Mineral, Lubricating, Black

	*Barrels. (42 gals.).	Dollars.
1923	47,155,711	6,361,092
1924	44,992,431	6,528,653
1925	49,055,791	6,399,944
1926	28,074,832	4,182,765
1927	621,254	3,300,642
1928	896,571	4,328,616
1929	954,616	5,434,933

* Quantity stated in Gallons prior to 1927.

Oil, Mineral, Lubricating, Cylinder

	*Barrels. (42 gals.).	Dollars.
1923	114,252,602	31,551,377
1924	112,142,588	32,973,087
1925	115,675,121	35,460,990
1926	140,729,945	42,408,624
1927	2,915,258	36,879,698
1928	2,998,008	34,464,715
1929	2,842,670	32,922,989

* Quantity stated in Gallons prior to 1927.

Oil, Mineral, Lubricating and Heavy Paraffin

	Gallons.	Dollars.
1881	4,852,203	1,054,064
1891	33,514,730	4,858,603
1901	71,457,605	10,006,937
1913	213,671,499	29,574,410
1914	196,884,006	27,852,959
1915	214,429,099	28,499,786
1916	250,392,768	37,451,607
1917	271,028,546	48,649,557

Stated as following classes after 1917:—

Oil, Mineral, Lubricating, Light Oils in Small Packages

	Gallons.	Dollars
1923	664,973	596,144
1924	563,706	535,466
1925	481,070	465,912
1926	443,082	427,985
1927	476,873	458,886
1928	583,404	523,943
1929	649,269	597,149

Oil, Mineral, Lubricating, Paraffin

	Gallons.	Dollars.
1918	10,287,896	2,131,292
1919	7,596,525	1,173,821
1920	6,823,644	1,527,773
1921	1,183,675	573,450
1922	15,077,854	2,996,612

Stated separately after 1922.

Oil, Mineral, Lubricating, Red and Pale

	*Barrels. (42 gals.).	Dollars.
1923	186,347,147	38,147,688
1924	210,481,538	43,910,970
1925	212,190,013	42,048,500
1926	225,019,048	42,606,563
1927	5,592,690	45,248,103
1929	6,756,940	58,548,399
1928	6,759,497	53,025,810

* Quantity stated in Gallons prior to 1927.

Oil, Mineral, Naphthas, Etc., Gasoline

	Gallons.	Dollars.
1913	81,698,917	10,931,490
1914	151,611,537	21,699,475
1915	156,860,666	17,603,317
1916	100,148,554	16,297,561
1917	226,154,560	46,932,967
1918	260,880,122	61,642,859
1919	322,920,087	78,088,061
1920	294,939,121	72,160,278
1921	382,610,683	108,199,531

Not stated separately after 1921.

Oil, Mineral, Petroleum, Crude

	*Barrels. (42 gals.).	Dollars.
1871	9,460,816	1,820,803
1881	39,984,844	3,065,464
1891	91,415,095	5,876,452
1901	138,448,430	6,696,029
1913	195,642,935	7,750,767
1914	146,477,342	6,312,672
1915	152,514,129	4,911,634
1916	163,734,200	5,754,279
1917	176,368,675	7,162,550
1918	185,069,674	9,288,979
1919	163,782,498	9,905,490
1920	356,542,830	24,263,884
1921	355,200,756	29,137,765
1922	378,975,150	16,366,428
1923	552,566,487	20,268,679
1924	787,716,436	26,342,596
1925	621,175,086	23,969,246
1926	590,992,499	26,215,994
1927	15,372,741	27,239,976
1928	16,977,027	25,313,727
1929	21,804,987	30,321,747

* Quantity stated in Gallons prior to 1927.

Oil, Mineral, Residuum, Including Road Oil

	(42 gals.).	Dollars.
1871	.....	14,770
1881	77,330	184,411
1891	38,066	77,422
1901	622,538	1,376,047
1913	27,513,568	496,237
1914	113,370,245	1,907,715
1915	9,952,970	230,552
1916	13,538,335	388,175
1917	551,967	33,813
1918	881,875	96,480
1919	181,121	14,557
1920	50,272,602	2,732,783
1921	9,825,633	609,302
1922	10,091,192	800,044
1923	8,364,896	668,784
1924	1,190,329	105,883
1925	2,725,586	232,074
1926	5,902,085	509,465
1927	195,871	584,399
1928	153,565	439,341
1929	45,038	175,724

* Quantity stated in Gallons, 1913 to 1926.

Oil, Mineral, White

	Gallons.	Dollars.
1928	124,500	107,371
1929	206,168	290,792

Oil, Orange

	Pounds.	Dollars.
1929	33,949	129,158

Oil, Peanut

	Pounds.	Dollars.
1920	4,922,781	1,196,831
1921	1,594,643	223,680
1922	963,102	100,691
1923	188,308	21,117
1924	167,529	14,448

Not stated after 1924.

Oil, Peppermint

	Pounds.	Dollars.
1891	45,321	120,831
1901	60,166	63,672
1913	144,663	395,551
1914	117,809	397,050
1915	184,981	384,593
1916	154,096	323,070
1917	100,032	218,627
1918	76,247	233,899
1919	65,548	325,070
1920	90,205	677,605
1921	50,425	286,624
1922	154,344	314,643
1923	102,507	290,715
1924	159,729	536,858
1925	127,218	823,116
1926	49,475	657,610
1927	143,984	803,787
1928	198,349	698,015
1929	212,535	746,843

Oil, Pine

	Pounds.	Dollars.
1929	2,043,453	129,165

Oil, Soya Bean

	Pounds.	Dollars.
1920	67,781,974	14,911,973
1921	5,117,605	760,643
1923	2,455,080	207,288
1923	2,495,218	218,460
1924	2,891,878	310,493
1925	578,601	64,913
1926	622,900	50,548
1927	3,104,114	386,045
1928	7,514,159	806,100
1929	8,241,444	806,586

Oils, Vegetable, All Other, Fixed or Expressed

	Pounds.	Dollars.
1891	.....	93,429
1901	.....	363,066
1913	.....	420,360
1914	.....	338,956
1915	.....	1,198,852
1916	.....	2,230,002
1917	.....	3,004,283
1918	.....	3,951,659
1919	.....	18,512,517
1920	.....	3,258,446
1921	.....	1,013,541
1922	6,369,664	669,142
1923	8,063,141	863,031
1924	7,118,048	865,443
1925	6,779,829	770,904
1926	7,974,479	927,790
1927	8,529,176	933,972
1928	9,032,766	1,223,028
1929	8,070,857	652,706

Oils, Vegetable, All Other, Essential or Distilled

	Pounds.	Dollars.
1871	.....	119,311
1881	.....	92,738
1891	.....	65,104
1901	.....	169,004
1913	.....	325,040
1914	.....	230,557
1915	.....	413,104
1916	.....	705,037
1917	.....	1,062,809
1918	.....	857,044
1919	.....	1,216,870
1920	.....	1,551,992
1921	.....	890,472
1922	.....	521,907
1923	583,670	611,659
1924	1,098,855	774,786
1925	1,175,504	923,111
1926	1,697,394	967,530
1927	3,728,064	1,167,474
1928	3,432,510	1,299,777
1929	3,742,727	1,336,598

Oils, Other Edible Vegetable Oils and Fats

	Pounds.	Dollars.
1927	1,425,297	214,882
1928	3,487,938	551,432
1929	3,507,426	583,570

Oilseeds

(Not elsewhere stated)

	Pounds.	Dollars.
1922	3,836,852	140,590
1923	2,721,909	94,967
1924	4,083,304	246,348
1925	3,169,900	212,316
1926	3,242,297	240,973
1927	826,821	89,091
1928	3,201,300	156,729
1929	1,422,067	87,772

Oleic Acid, or Red Oil

	Pounds.	Dollars.
1922	3,590,298	290,482
1923	2,378,676	201,556
1924	2,693,135	220,272
1925	1,432,931	126,814
1926	774,359	79,371
1927	871,971	79,581
1928	4,476,989	396,850
1929	5,561,651	497,988

Oleo Stock

	Pounds.	Dollars.
1922	15,596,285	1,523,464
1923	12,520,959	1,359,349
1924	11,344,686	1,277,193
1925	15,128,948	1,890,776
1926	11,833,316	1,513,345
1927	12,031,543	1,302,011
1928	8,480,927	1,116,580
1929	6,530,419	730,749

Oleo and Lard Stearin

	Pounds.	Dollars.
1922	10,678,056	1,049,692
1923	10,134,498	1,051,212
1924	7,081,402	760,833
1925	7,138,661	868,408
1926	7,660,673	1,002,706
1927	6,669,828	721,084
1928	3,927,252	436,761
1929	4,257,547	479,298

Oleomargarin of Animal or Vegetable Fats

	Pounds.	Dollars.
1926	1,256,251	182,014
1927	942,296	149,115
1928	732,117	118,890
1929	632,563	115,364

Oleomargarin Containing Animal Fats

	Pounds.	Dollars.
1881	26,327,671	3,815,560
1891	1,986,743	255,624
1901	12,990,699	484,501
1913	2,987,582	311,485
1914	2,532,821	263,453
1915	5,252,183	617,035
1916	5,426,221	640,480
1917	5,651,267	901,659
1918	6,309,896	1,631,267
1919	18,570,400	5,179,429
1920	20,952,180	6,047,413
1921	6,219,165	1,478,649
1922	1,989,421	353,803
1923	2,027,546	327,986
1924	1,125,096	179,906
1925	732,311	122,018

Not stated separately after 1925.

Oleomargarin, Vegetable

	Pounds.	Dolla-
1922	333,756	47,769
1923	1,736,389	235,842
1924	270,900	44,131
1925	155,171	24,790

Not stated separately after 1925.

Oxygen Gas

	Pounds.	Dollars.
1928	236,614	41,841
1929	709,866	89,152

Paints, Dry Colors, N. E. S.

	Pounds.	Dollars.
1914	.....	690,836
1915	.....	1,073,736
1916	.....	1,591,913
1917	.....	1,810,393
1918	.....	1,907,667
1919	.....	2,808,980
1920	.....	2,991,618
1921	.....	2,170,237
1922	31,992,845	1,350,448
1923	35,146,264	1,633,416
1924	33,363,044	1,437,948

Not stated separately after 1924.

Exports from the United States

Paint, Enamel

	Gallons.	Dollars.
1922	.....	418,521
1923	.....	579,843
1924	.....	497,639
1925	.....	564,754
1926	.....	1,216,060
1927	390,321	1,045,869
1928	630,203	1,480,696
1929	682,782	1,811,069

Paints, Roofing, Liquid or Plastic

	Gallons.	Dollars.
1929	1,337,558	750,510

Paints, Ship Bottom

	Gallons.	Dollars.
1928	31,485	70,973
1929	58,237	101,730

Paints, Other Ready Mixed

	Gallons.	Dollars.
1914	852,910	1,096,335
1915	703,494	884,700
1916	1,099,721	1,384,226
1917	1,216,062	1,756,393
1918	1,519,472	2,398,332
1919	2,288,632	4,556,192
1920	2,551,531	5,278,390
1921	2,317,630	5,357,696
1922	1,080,699	2,258,019
1923	1,652,203	3,344,826
1924	1,937,294	3,883,649
1925	2,098,862	4,364,770
1926	2,192,415	4,523,916
1927	2,514,609	5,165,616
1928	2,629,969	5,277,534
1929	3,080,344	5,798,157

Paints, Red Lead

	Pounds.	Dollars.
1918	4,792,330	567,854
1919	7,952,730	946,114
1920	3,072,731	348,907
1921	2,046,339	244,151
1922	2,015,696	168,724
1923	4,098,227	401,191
1924	2,517,030	265,091
1925	1,452,968	163,315
1926	1,815,177	209,247
1927	2,160,833	219,550
1928	2,986,255	267,595
1929	5,708,689	497,683

Paints, White Lead

	Pounds.	Dollars.
1914	16,845,154	1,013,506
1915	19,700,810	1,070,646
1916	29,107,449	1,861,730
1917	21,388,038	1,944,145
1918	18,235,783	2,072,352
1919	20,462,348	2,337,318
1920	34,441,918	3,598,913
1921	17,408,803	1,895,696
1922	8,945,730	672,211
1923	8,575,154	710,655
1924	10,081,589	807,313
1925	12,585,507	1,131,169
1926	13,410,634	1,251,819
1927	11,393,274	992,917
1928	13,962,979	1,019,783
1929	10,714,019	796,124

Paints, Not Elsewhere Specified

	Pounds.	Dollars.
1871	.....	172,604
1881	.....	287,338
1891	.....	690,698
1901	.....	1,317,961
1914	.....	1,779,863
1915	.....	1,527,494
1916	.....	3,259,539
1917	.....	4,413,549
1918	.....	4,876,312
1919	.....	6,213,430
1920	.....	7,310,876
1921	.....	5,947,461
1922	10,068,393	1,720,360
1923	11,476,700	2,007,894
1924	9,368,566	1,599,001
1925	9,529,435	1,749,672
1926	11,509,686	2,490,478
1927	9,308,733	1,923,022
1928	9,459,461	1,856,991
1929	2,796,677	560,532

Paper, Grease- and Waterproof

	Pounds.	Dollars.
1918	.....	155,188
1919	.....	596,887
1920	.....	239,512
1921	.....	345,366
1922	1,096,766	143,467
1923	1,363,182	182,340
1924	1,733,827	217,905
1925	1,539,822	198,637
1926	2,376,837	349,477
1927	2,479,406	351,656
1928	2,808,068	424,492
1929	2,989,898	515,877

Paraffin

	Pounds.	Dollars.
1871	37,423	4,758
1881	5,369,821	437,187
1891	66,366,003	3,714,649
1901	129,184,964	6,857,288
1913	290,678,861	9,679,273
1914	186,357,728	6,516,338
1915	330,374,056	10,589,843
1916	360,650,114	12,873,250
1917	348,743,903	16,038,811

Stated as following classes after 1917:—

Paraffin, Unrefined

	Pounds.	Dollars.
1918	82,534,361	4,677,280
1919	53,729,436	4,915,237
1920	79,023,341	5,377,069
1921	50,121,130	2,994,654
1922	69,651,581	2,039,943
1923	94,914,178	2,773,283
1924	92,065,331	3,246,454
1925	76,936,429	3,853,025
1926	70,392,980	3,714,826
1927	67,082,124	3,228,117
1928	94,401,787	3,062,565
1929	69,052,933	2,874,614

Paraffin, Refined

	Pounds.	Dollars.
1918	164,159,159	13,866,810
1919	185,078,571	19,042,149
1920	282,384,250	26,088,672
1921	203,289,734	17,524,258
1922	189,864,980	6,965,791
1923	232,368,527	8,329,708
1924	275,579,838	11,581,138
1925	256,488,677	14,111,913
1926	273,199,220	15,547,800
1927	259,161,962	14,082,180
1928	316,515,644	12,915,110
1929	245,358,045	12,388,618

Paste

		Dollars.
1901	.....	863
1913	.....	69,032
1914	.....	68,831
1915	.....	91,522
1916	.....	208,537
1917	.....	209,585

Included in "Mucilage and Paste" after 1917.

Peanuts

	Pounds.	Dollars.
1915	5,875,076	325,725
1916	8,669,430	450,765
1917	22,413,297	1,336,638
1918	12,488,209	1,517,831
1919	13,596,660	1,475,195
1920	14,137,956	1,740,002
1921	13,149,417	1,063,353
1922	12,621,302	834,912
1923	8,716,289	681,189
1924	3,993,914	381,492
1925	2,862,773	307,201
1926	3,711,195	302,241
1927	5,068,612	397,820
1928	4,580,546	452,064
1929	5,794,884	494,632

Perfumery and Toilet Waters

		Dollars
1871	.....	392,993
1881	.....	292,939
1891	.....	450,663
1901	.....	880,994
1913	.....	1,441,982
1914	.....	1,620,872
1915	.....	1,715,059
1916	.....	2,903,063
1917	.....	3,618,620
1918	.....	3,965,465
1919	.....	6,077,854
1920	.....	7,079,237
1921	.....	6,236,766
1922	.....	504,167
1923	.....	582,435
1924	.....	461,096
1925	.....	439,932
1926	.....	424,381
1927	.....	370,215
1928	.....	435,943
1929	.....	422,193

Petroleum Asphalt

	Tons.	Dollars.
1926	109,421	2,560,068
1927	241,711	5,794,256
1928	461,280	10,952,456
1929	355,785	7,258,124

Petroleum Coke

	Tons.	Dollars.
1929	130,586	1,274,374

Petroleum Jelly, Petrolatum

	Pounds.	Dollars.
1913	.....	536,637
1914	.....	661,889
1915	.....	838,842
1916	.....	1,099,315
1917	.....	989,367
1918	.....	1,278,658
1919	.....	2,608,701
1920	.....	3,156,286
1921	.....	2,072,595
1922	7,264,224	1,254,183
1923	7,579,221	1,186,230
1924	10,026,134	1,211,606
1925	7,971,370	1,131,944
1926	5,648,619	991,436
1927	5,163,205	862,748
1928	5,639,428	870,788
1929	6,447,353	905,590

Pigments, Ocher, Umber, Sienna, Metallic, Whiting, Etc.

	Pounds.	Dollars.
1923	29,458,942	1,025,438
1924	29,094,818	892,507
1925	26,438,536	791,545
1926	33,348,402	997,070
1927	35,048,106	1,039,491
1928	39,114,090	1,180,255
1929	38,779,090	1,045,267

Pigments, Chemical, N. E. S.

	Pounds.	Dollars.
1925	5,335,926	622,344
1926	6,420,933	803,547
1927	4,817,414	593,784
1928	3,880,512	560,034
1929	6,804,664	975,727

Plasters, Medicated

	Pounds.	Dollars.
1925	487,357	636,536
1926	501,120	632,465
1927	377,126	514,369
1928	333,555	401,434
1929	.....	491,798

Quantity not stated after 1928.

Platinum, Ingots, Sheets, Wire, Alloys and Scrap

	Ounces, troy.	Dollars.
1913	1,299	57,071
1914	278	12,977
1915	1,397	53,266
1916	1,083	92,388
1917	3,254	207,662
1918	468	50,697
1919	91	10,074
1920	1,640	223,332
1921	3,065	234,804
1922	1,198	84,250
1923	1,080	118,938
1924	3,275	358,205
1925	11,933	1,314,773
1926	14,907	1,641,243
1927	13,772	1,307,891
1928	16,378	1,115,620
1929	4,852	352,041

Platinum Manufactures (Except Jewelry)

	Ounces, troy.	Dollars.
1913	.....	126,015
1914	.....	71,172
1915	.....	27,101
1916	.....	82,929
1917	.....	77,265
1918	.....	33,557
1919	.....	30,363
1920	.....	85,364
1921	.....	114,873
1922	486	35,967
1923	279	24,969
1924	882	88,178
1925	2,254	234,427
1926	3,396	208,837
1927	1,606	155,465
1928	1,688	120,898
1929	2,021	143,090

Plumbago or Graphite, Unmanufactured

	Pounds.	Dollars.
1881	.....	135
1891	.....	.....
1900	.....	35,908
1913	4,503,569	321,679
1914	5,376,880	387,075
1915	2,324,081	152,446
1916	936,869	46,907
1917	2,500,057	163,333
1918	4,912,730	331,369
1919	1,392,043	102,162
1920	1,306,859	107,552
1921	1,195,228	84,908
1922	1,893,881	90,183
1923	1,197,760	100,782
1924	2,003,891	147,613
1925	2,170,979	159,908
1926	1,076,866	75,210

Included in next class after 1926.

Plumbago or Graphite and Manufactures, Except Crucibles

	Pounds.	Dollars.
1913	.....	175,583
1914	.....	269,499
1915	.....	368,333
1916	.....	845,729
1917	.....	1,296,305
1918	.....	716,538
1919	.....	862,544
1920	.....	517,188
1922	2,028,463	255,019
1923	2,142,055	302,941
1924	1,554,195	268,489
1925	1,824,136	289,286
1926	3,281,135	455,031
1927	4,133,254	480,236
1928	3,733,918	391,892
1929	4,188,204	476,660

Polishes, Metal and Stove

	Pounds.	Dollars.
1913	.....	127,898
1914	.....	162,504
1915	.....	167,277
1916	.....	225,783
1917	.....	214,800
1918	.....	192,691
1919	.....	262,043
1920	.....	451,934
1921	.....	346,104
1922	5,602,952	400,186
1923	2,553,406	312,181
1924	3,084,322	360,046
1925	3,188,649	375,885
1926	2,247,537	319,896
1927	2,574,429	367,103
1928	2,241,451	360,586
1929	1,811,596	284,687

Polishes, Shoe

	Pounds.	Dollars.
1922	5,173,840	1,188,552
1923	5,709,705	1,279,923
1924	5,647,717	1,312,066
1925	5,439,708	1,270,834
1926	4,140,347	1,157,845
1927	3,253,603	992,552
1928	3,643,509	957,217
1929	2,899,565	870,435

Polishes, All Other

	Pounds.	Dollars.
1915	.....	503,629
1916	.....	784,552
1917	.....	1,036,234
1918	.....	1,009,100
1919	.....	2,077,319
1920	.....	2,845,110
1921	.....	2,072,963
1922	3,913,206	567,932
1923	3,270,605	468,438
1924	2,537,564	471,916
1925	2,515,106	496,495
1926	2,816,984	527,095
1927	3,689,580	668,601
1928	3,752,246	766,972
1929	3,564,259	751,660

Potash, Bichromate

	Pounds.	Dollars.
1922	4,430,208	433,552
1923	3,484,876	318,220
1924	1,574,674	142,695
1925	901,576	74,654
1926	251,978	19,717

Not stated after 1926.

Potash, Chlorate

	Pounds.	Dollars.
1918	1,564,662	681,128
1919	1,903,133	678,276
1920	2,845,858	475,034
1921	1,130,771	179,300
1922	447,730	46,252
1923	391,120	39,667
1924	493,417	26,538

Not stated after 1924.

Potash Compounds, N. E. S.

	Pounds.	Dollars.
1918	.....	961,989
1919	.....	1,318,188
1920	.....	3,362,827
1921	.....	1,309,852
1922	7,483,175	296,378
1923	4,232,193	199,778
1924	3,261,590	156,391
1925	2,477,853	274,359
1926	3,545,149	317,670
1927	3,086,564	352,102
1928	13,194,831	791,160
1929	4,855,184	614,655

Pyroxylin Products, Known as Celluloid, etc., Unmanufactured

	Pounds.	Dollars.
1922	1,225,063	1,494,372
1923	1,790,701	2,232,074
1924	1,756,210	1,991,701
1925	2,629,360	2,371,849
1926	2,300,144	1,770,968
1927	1,700,967	1,320,616
1928	2,391,481	1,915,984
1929	3,556,084	2,314,784

Quicksilver or Mercury

	Pounds.	Dollars.
1871	994,035	732,845
1881	2,995,948	1,124,955
1891	157,052	85,359
1901	716,559	400,288
1913	40,410	21,885
1914	64,190	32,241
1915	222,927	155,089
1916	232,763	274,086
1917	1,018,094	1,071,325
1918	502,088	679,414
1919	538,325	651,083
1920	330,175	399,503
1921	27,358	25,022
1922	29,650	19,169
1923	20,902	17,613
1924	20,669	22,996
1925	14,431	13,485
1926	11,544	12,919

Not stated after 1926.

Quinine Sulphate and Other Salts of Cinchona

	Ounces.	Dollars.
1922	355,181	219,534
1923	365,852	160,366
1924	326,282	164,149
1925	637,373	215,258
1926	314,825	162,682
1927	274,837	127,847
1928	247,620	110,586
1929	348,840	143,440

Rosin, Gum

	Barrels (500 lbs.)	Dollars.
1871	511,959	1,600,651
1881	1,023,710	2,529,423
1891	1,790,251	3,467,199
1901	2,820,815	4,742,457
1913	2,806,046	17,359,145
1914	2,417,950	11,217,316
1915	1,372,316	6,220,321
1916	1,571,279	8,874,313
1917	1,638,590	10,705,972
1918	1,070,929	7,878,718
1919	881,777	11,323,381
1920	1,322,034	24,847,681
1921	877,109	10,363,147
1922	1,403,721	6,623,499
1923	1,039,742	10,157,216
1924	1,205,038	10,659,679
1925	1,412,289	16,047,225
1926	1,086,040	21,815,412
1927	1,087,795	22,923,325
1928	1,154,841	17,662,322
1929	1,133,298	16,824,504

Rosin, Wood

	Barrels. (500 lbs.).	Dollars.
1927	140,913	2,526,196
1928	144,840	1,956,416
1929	176,227	2,426,216

Salt

	Pounds.	Dollars.
1871	7,209,560	47,115
1881	2,739,300	14,752
1891	5,242,280	29,510
1901	14,183,167	67,316
1913	128,035,915	441,673
1914	148,931,205	542,783
1915	165,619,386	616,132
1916	165,637,801	600,648
1917	194,151,456	726,761
1918	267,045,840	1,416,798
1919	242,143,146	1,541,766
1920	257,493,745	1,810,061
1921	242,632,102	1,649,429
1922	257,884,879	1,521,529
1923	259,490,565	1,260,733
1924	261,232,700	1,198,242
1925	295,101,232	1,261,195
1926	319,422,301	1,297,568
1927	310,430,078	1,244,722
1928	280,763,366	1,216,482
1929	272,600,324	1,149,895

Seed, Cotton

	Pounds.	Dollars.
1871	.....	29,386
1881	75,693	3,031
1891	10,108,014	85,315
1901	43,329,257	366,953
1913	24,048,647	328,988
1914	16,342,384	215,115
1915	6,314,439	94,237
1916	2,475,907	37,811
1917	1,001,369	33,434
1918	1,565,052	57,693
1919	1,603,795	65,937
1920	3,506,218	197,450
1921	4,811,313	246,783
1922	2,355,318	83,755

Not stated after 1922.

Seed, Flax

	Bushels.	Dollars.
1871	282	721
1881	.....	.....
1891	144,848	184,564
1901	2,755,683	4,319,102
1913	16,894	26,699
1914	305,546	436,874
1922	78,268,703	6,154,911
1915	4,145	9,748
1916	2,614	6,501
1917	1,017	3,671
1918	21,481	98,165
1919	15,574	110,142
1920	24,044	182,706
1921	1,481	4,378
1922	2,267	7,607

Not stated after 1922.

Soap, Laundry

	Pounds.	Dollars.
1923	68,742,844	4,828,790
1924	59,097,581	4,184,584
1925	54,456,663	3,859,856
1926	56,307,234	4,022,589
1927	63,328,826	4,200,770
1928	49,070,732	3,432,951
1929	48,911,981	3,412,972

Soap, Powdered and Flaked

	Pounds.	Dollars.
1929	951,739	99,620

Soap, Scouring and Scouring Powders

	Pounds.	Dollars.
1929	8,632,348	567,963

Soap, Shaving (Creams, Polishes and Sticks)

	Pounds.	Dollars.
1929	495,401	242,653

Soap, Toilet or Fancy

	Pounds.	Dollars.
1871	.....	19,954
1881	.....	44,396
1891	.....	86,704
1901	.....	562,514
1913	.....	2,132,663
1914	.....	2,141,633
1915	.....	1,777,342
1916	.....	2,610,481
1917	.....	2,122,674
1918	.....	2,246,258
1919	.....	3,896,179
1920	.....	6,625,259
1921	.....	4,182,428
1922	7,505,881	2,869,007
1923	8,563,954	3,250,030
1924	5,618,714	2,460,670
1925	5,865,447	2,507,277
1926	8,082,255	3,030,802
1927	8,629,103	2,900,226
1928	8,316,494	2,743,969
1929	6,561,663	2,045,211

Exports from the United States

Soap, Other

	Pounds.	Dollars.
1871	7,786,276	376,026
1881	13,323,737	650,361
1891	25,750,671	1,050,559
1901	28,779,000	1,006,666
1913	51,292,554	2,496,904
1914	58,847,763	2,797,369
1915	63,367,750	3,080,957
1916	75,548,686	3,709,277
1917	73,049,219	4,169,117
1918	82,726,757	6,894,454
1919	143,128,191	13,723,225
1920	155,891,586	16,102,825
1921	85,830,216	8,447,007
1923	16,231,584	1,462,451
1924	18,493,281	1,560,252
1925	15,603,908	1,373,042
1926	14,137,737	1,263,673
1927	13,045,720	1,178,887
1928	10,466,198	991,881
1929	7,580,805	723,573

Soapstock, Vegetable

	Pounds.	Dollars.
1923	3,610,593	238,977
1924	3,996,290	230,816
1925	6,166,826	335,500
1926	12,167,877	727,889
1927	11,171,088	620,003
1928	8,136,785	464,968
1929	7,588,927	537,377

Soda Ash

	Pounds.	Dollars.
1918	198,752,457	6,074,879
1919	191,864,329	6,261,518
1920	116,535,500	2,804,130
1921	113,481,062	3,308,783
1922	33,090,180	757,648
1923	29,858,337	699,671
1924	26,404,428	673,735
1925	33,204,487	779,533
1926	34,701,719	855,755
1927	41,504,725	961,256
1929	33,668,482	589,159

Not separately stated in 1928.

Soda Bicarbonate

	Pounds.	Dollars.
1920	11,998,510	360,601
1921	13,353,769	389,337
1922	14,803,631	347,233
1923	16,849,078	371,065
1924	15,920,717	357,494
1925	15,310,178	322,456
1926	19,391,529	383,789
1927	18,449,361	343,478
1928	19,319,843	355,974
1929	18,125,290	332,740

Soda Bichromate and Chromate

	Pounds.	Dollars.
1925	3,496,145	211,166
1926	7,820,620	477,768
1927	9,461,452	595,950
1928	8,732,866	559,845
1929	6,181,072	406,413

Soda, Carbonate (Soda Ash, Sal Soda and Washing Soda)

	Pounds.	Dollars.
1928	56,871,504	1,175,242

Stated separately before and after 1928.

Soda Caustic

	Pounds.	Dollars.
1918	134,729,691	8,629,086
1919	127,192,309	6,382,511
1920	229,146,363	9,321,902
1921	101,021,827	5,478,055
1922	123,126,777	4,660,815
1923	115,834,650	4,061,858
1924	100,243,033	3,175,791
1925	94,806,930	2,849,278
1926	105,276,932	3,109,699
1927	104,919,887	3,117,134
1928	107,417,678	3,139,265
1929	63,363,899	1,856,583

Soda Cyanide

	Pounds.	Dollars.
1922	1,248,294	235,224
1923	3,491,859	391,496
1924	5,620,819	552,769
1925	1,481,284	269,002
1926	1,917,807	310,581
1927	1,425,418	231,249
1928	1,479,719	242,056
1929	2,001,340	308,081

Soda Salts and Preparations

		Dollars.
1915	.....	3,141,022
1916	.....	12,649,854
1917	.....	18,381,450

Not stated prior to 1915 and subdivided after 1917; see following classes.

Soda, Sal

	Pounds.	Dollars.
1918	14,076,264	205,489
1919	10,675,870	186,382
1920	12,763,399	202,039
1921	10,376,424	207,539
1922	11,061,664	200,903
1923	12,185,928	186,550
1924	12,784,299	194,172
1925	12,459,512	176,515
1926	13,618,569	192,211
1927	12,746,736	163,288
1929	6,193,205	87,448

Not stated separately in 1928.

Soda Silicate (Water Glass)

	Pounds.	Dollars.
1918	26,125,740	373,822
1919	26,009,043	400,508
1920	33,692,535	420,124
1921	23,099,660	321,972
1922	26,024,366	279,041
1923	31,430,252	308,862
1924	32,225,650	314,082
1925	36,089,562	321,238
1926	44,199,518	381,829
1927	50,766,700	408,325
1928	56,751,164	537,518
1929	67,371,378	647,378

Soda Sulphate

	Pounds.	Dollars.
1929	1,720,774	32,432

Soda, Other Salts of

	Pounds.	Dollars.
1918	.....	7,421,521
1919	.....	6,475,158
1920	.....	7,485,008
1921	.....	5,378,809
1922	97,518,434	2,439,113
1923	129,704,630	2,363,007
1924	121,116,444	2,178,981
1925	102,676,879	1,713,378
1926	100,750,268	1,353,362
1927	70,973,698	1,520,302
1928	87,195,704	1,466,140
1929	201,525,763	2,014,567

Spices

	Pounds.	Dollars.
1891	.....	22,440
1901	.....	20,204
1914	.....	84,427
1915	.....	76,297
1916	.....	250,827
1917	.....	287,484
1918	.....	507,712
1919	.....	539,313
1920	.....	607,442
1921	.....	322,524
1922	1,363,252	167,241
1923	1,644,959	200,769
1924	1,667,842	198,963
1925	1,531,794	235,581
1926	1,166,986	203,986
1927	1,437,374	219,862
1928	1,356,669	247,838
1929	1,889,071	296,405

Sponges

	Pounds.	Dollars.
1871	.....	1,546
1881	.....	6,736
1891	35,966	20,821
1901	63,654	29,554
1913	205,804	177,059
1914	209,470	173,866
1915	117,618	109,635
1916	197,826	165,884
1917	116,131	129,063
1918	130,471	177,210
1919	187,151	212,641
1920	298,021	307,123
1921	110,928	156,163
1922	114,229	141,050
1923	141,049	174,242
1924	122,271	122,446
1925	151,809	157,640
1926	100,559	140,937
1927	95,988	150,561
1928	133,661	185,333
1929	106,171	142,773

Starch

	Pounds.	Dollars.
1871	1,761,813	115,098
1881	13,473,419	629,710
1891	12,883,821	475,817
1901	102,800,725	2,005,865
1913	110,987,591	2,609,716
1914	76,713,779	1,825,230
1915	107,036,638	2,939,453
1916	210,185,192	5,576,914
1917	140,423,822	4,721,533

Stated separately after 1917.

Starch, Cornstarch (Including Corn Flour)

	Pounds.	Dollars.
1918	38,659,323	2,220,377
1919	105,726,970	5,333,480
1920	163,314,642	10,238,284
1921	110,514,424	4,251,173
1922	348,940,114	7,294,865
1923	254,060,008	6,741,443
1924	255,134,988	8,148,320
1925	209,865,494	7,222,626
1926	208,462,588	6,970,908
1927	212,374,880	6,502,640
1928	275,920,902	8,663,355
1929	231,666,945	8,404,703

Starch, All Other

	Pounds.	Dollars.
1918	35,223,390	2,282,015
1919	38,061,260	2,197,518
1920	74,293,884	4,675,096
1921	24,850,212	1,146,163
1922	37,932,600	903,786
1923	6,736,187	238,612
1924	7,707,391	277,840
1925	4,381,557	202,975
1926	16,106,601	513,923
1927	20,737,476	619,675
1928	5,467,065	217,148
1929	3,993,300	192,899

Stearin from Animal Fats

	Pounds.	Dollars.
1871	.....	2,506
1881	1,118,848	87,924
1891	1,347,386	62,194
1915	11,457,907	1,083,665
1916	13,062,247	1,461,661
1917	12,936,357	1,798,317
1918	10,360,030	2,181,317
1919	11,537,284	2,309,979
1920	22,505,608	4,717,748
1921	19,177,311	2,429,414
1922	33,017,879	3,183,684

See "Oleo and Lard Stearin, Etc." after 1922.

Stearin, Vegetable

	Pounds.	Dollars.
1917	1,321,773	179,092
1918	1,226,127	248,585
1919	782,467	166,423
1920	5,138,225	962,394
1921	1,848,313	224,576
1922	1,949,422	194,596
1923	564,236	56,219
1924	175,998	24,874

Not stated separately after 1924.

Sulphur or Brimstone, Crude

	Tons.	Dollars.
1913	73,861	1,353,310
1914	110,022	2,018,724
1915	48,391	885,756
1916	68,460	1,314,290
1917	177,548	3,595,512
1918	140,525	3,842,904
1919	123,891	3,781,586
1920	393,404	8,725,112
1921	376,046	6,546,639
1922	409,722	6,969,871
1923	470,900	6,985,561
1924	454,333	6,963,835
1925	536,911	8,990,383
1926	644,301	11,803,370
1927	670,221	13,240,726
1928	724,428	15,226,525
1929	764,380	15,776,913

Sulphur, Refined, Sublimed, and Flowers

	Pounds.	Dollars.
1922	5,162,966	113,729
1923	5,166,092	128,523
1924	4,598,639	101,868
1925	5,334,938	127,478
1926	8,496,278	179,399
1927	21,232,120	398,126
1928	42,815,545	679,035
1929	39,261,416	644,075

Talcum and Other Toilet Powders

	Pounds.	Dollars.
1922	3,642,604	1,397,542
1923	3,734,831	1,496,567
1924	3,314,013	1,609,905
1925	3,356,216	1,751,024
1926	3,493,828	1,912,878
1927	3,116,337	1,619,876
1928	3,239,011	1,651,377

Stated separately after 1929.

Talcum Powder

		Dollars.
1929	.....	409,607

Tallow

	Pounds.	Dollars.
1871	33,859,317	3,025,035
1881	96,403,372	6,800,828
1891	111,689,251	5,501,949
1901	77,166,889	3,843,501
1913	30,586,300	1,910,439
1914	15,812,831	1,002,011
1915	20,239,988	1,386,445
1916	16,288,743	1,326,472
1917	15,209,369	1,800,909
1918	5,014,964	931,941
1919	16,172,111	2,325,177
1920	32,937,026	5,738,181
1921	16,843,868	1,920,376
1922	31,376,275	2,210,762
1923	35,876,238	2,972,690
1924	37,371,722	2,946,676
1925	28,775,863	2,618,528
1926	12,221,438	1,130,743
1927	9,128,108	789,633
1928	4,824,489	428,570
1929	2,811,372	255,324

Tanning Extracts, Chestnut

	Pounds.	Dollars.
1922	7,911,316	253,815
1923	7,386,713	268,098
1924	9,309,452	301,303
1925	7,814,685	241,970
1926	6,117,614	178,634
1927	6,671,435	195,309
1928	6,435,517	187,138
1929	10,841,523	341,773

Tanning Extracts, Other (Vegetable and Chemical)

	Pounds.	Dollars.
1922	22,612,678	1,051,163
1923	24,942,925	1,174,108
1924	23,400,416	1,148,249
1925	21,063,238	1,152,431
1926	22,976,856	1,188,242
1927	24,819,816	1,284,137
1928	40,518,892	2,088,936
1929	32,080,666	1,724,901

Tar, Turpentine and Pitch

	Barrels.	Dollars.
1871	32,584	93,884
1881	46,582	109,381
1891	25,806	46,274
1901	50,526	123,464
1914	351,352	568,801
1915	239,661	430,612
1916	67,963	291,731
1917	103,397	561,566
1918	82,030	598,211
1919	48,030	384,263
1920	61,790	534,175
1921	41,748	377,649
1922 (July 1 to Dec. 1)	9,817	63,158

Sub-divided after Dec. 31. See following

Tar and Pitch, Wood

	*Barrels. (500 lbs.).	Dollars.
1922	31,520	159,173
1923	34,499	204,974
1924	39,730	427,103
1924	28,238	189,274
1926	22,115	206,916
1927	27,240	273,477
1928	18,464	199,359
1929	25,248	268,577

* Quantity stated in Barrels (280 lbs.) prior to 1927.

Tin Bars, Blocks or Pigs

	Pounds.	Dollars.
1917	798,288	427,709
1918	260,391	127,219
1919	488,902	352,483
1920	829,016	500,086
1921	2,564,532	968,354
1922	1,455,677	432,571
1923	1,922,327	685,509
1924	998,860	430,317
1925	788,893	408,051
1926	1,024,165	555,420
1927	1,865,602	836,241
1928	1,868,279	664,095
1929	1,318,255	604,012

Tobacco Extracts (Except Nicotine Sulphate)

	Pounds.	Dollars.
1927	1,483,205	447,735
1928	1,475,207	363,116
1929	1,976,926	345,678

Tungsten, Manganese and Other Ferro-Alloys, N. E. S.

	Pounds.	Dollars.
1917	1,784,306	3,597,426
1918	2,184,769	4,056,487
1919	177,123	408,148
1920	17,494	57,820
1921	1,600	1,625
1922	303	13,189
1923	1,078	58,049
1924	1,582	67,301

Quantity in tons after 1921.
Not stated after 1924.

Turpentine, Gum Spirits

	Gallons.	Dollars.
1871	2,453,554	1,009,508
1881	6,595,528	2,414,719
1891	12,243,621	4,668,140
1901	20,240,851	7,715,029
1913	21,039,597	8,794,656
1914	18,900,704	8,095,958
1915	9,464,120	4,476,306
1916	9,310,268	4,337,563
1917	8,841,875	4,313,670
1918	5,095,124	2,695,935
1919	8,063,578	6,069,853
1920	7,461,355	11,121,864
1921	9,741,711	11,279,253
1922	10,786,280	8,071,839
1923	9,012,356	11,480,499
1924	11,194,173	10,606,870
1925	12,308,274	10,984,515
1926	10,241,172	10,057,705
1927	13,820,289	11,193,289
1928	14,332,243	7,933,979
1929	14,174,844	7,531,468

Turpentine Substitutes (Mineral Spirits)

	Gallons.	Dollars.
1924	1,063,893	425,245
1925	941,047	274,794
1926	1,415,607	348,931
1927	2,788,719	562,335
1928	1,874,609	444,725
1929	2,625,290	573,087

Turpentine, Wood

	Gallons.	Dollars.
1922	494,576	342,430
1923	397,870	330,827
1924	493,911	425,581
1925	522,660	403,708
1926	707,028	633,164
1927	645,097	462,961
1928	957,117	492,738
1929	901,518	441,011

Varnishes, Oil

	Gallons.	Dollars.
1922	376,416	657,117
1923	501,274	876,397
1924	621,296	1,081,136
1925	668,790	1,191,308
1926	674,612	1,176,429
1927	545,941	1,004,942
1928	457,373	827,869
1929	491,730	855,328

Varnishes, Other

	Gallons.	Dollars.
1871	54,454	79,292
1881	87,408	156,617
1891	153,365	208,285
1901	606,187	611,459
1913	1,279,777	1,267,860
1914	1,069,501	1,038,864
1915	731,604	682,352
1916	846,362	888,339
1917	891,812	1,104,698
1918	736,949	1,209,762
1919	1,174,664	2,238,384
1920	1,529,592	2,986,950
1921	1,158,025	2,421,839
1922	611,255	1,024,279
1923	379,542	618,389
1924	344,198	579,068
1925	305,252	533,453
1926	485,899	897,433
1927	595,653	1,282,744
1928	645,230	1,231,142
1929	362,200	504,208

Washing Powders and Fluids

	Pounds.	Dollars.
1913	9,923,700	756,762
1914	12,761,958	535,685
1915	14,695,317	635,476
1916	7,875,317	355,926
1917	3,517,441	197,614
1918	4,754,804	243,184
1919	3,984,745	231,786
1920	6,114,816	357,074
1921	4,021,497	267,597
1922	3,346,375	291,609
1923	4,661,606	269,445
1924	4,908,893	276,765
1925	4,679,249	278,682
1926	4,167,617	233,049
1927	5,939,900	321,817
1928	5,001,738	294,850

Stated as various classes under "Soaps" after 1928.

Water Bottles, Rubber, and Fountain Syringes

	Number.	Dollars.
1925	303,808	215,243
1926	270,267	199,256
1927	313,248	215,580
1928	365,023	239,069
1929	388,250	248,420

Wood Preservatives

	Pounds.	Dollars.
1928	62,108	5,941

Yeast

	Pounds.	Dollars.
1901	.....	6,809
1917	.....	1,021,651
1918	.....	918,842
1919	.....	1,116,690
1920	.....	868,718
1921	.....	675,203
1922	896,963	96,137
1923	2,750,901	694,543
1924	2,514,815	667,069
1925	3,118,695	803,512
1926	3,575,375	921,374
1927	3,671,944	975,817
1928	3,566,501	637,989
1929	3,387,393	623,621

Zinc Dross

	Pounds.	Dollars.
1901	.....	164,140
1914	572,477	29,084
1915	10,361,840	557,247
1916	2,526,288	164,649
1917	10,692,766	886,017
1918	31,104,163	2,283,843
1919	26,500,333	1,929,545
1920	4,097,465	269,997
1921	1,095,186	69,293
1922	10,567,684	373,391
1925	14,686,813	743,711
1926	28,689,439	1,454,075
1927	13,557,535	610,011
1928	8,704,947	307,520

Not stated for 1923 and 1924.

Zinc Dust

	Pounds.	Dollars.
1922	3,995,124	287,800
1923	5,578,922	400,264
1924	6,143,778	439,669
1925	4,372,803	356,827
1926	3,473,345	631,662
1927	2,445,450	246,112
1928	2,835,452	264,681
1929	1,511,728	155,000

Zinc Oxide

	Pounds.	Dollars.
1871	1,082,362	48,292
1881	1,281,375	16,405
1891	8,172,000	142,011
1901	9,456,057	412,719
1914	29,197,790	1,215,360
1915	37,580,411	1,806,970
1916	31,222,228	1,960,583
1917	31,486,377	3,066,019
1918	25,362,063	2,750,619
1919	26,051,535	3,924,198
1920	30,925,243	2,895,988
1921	10,149,360	1,016,784
1922	6,726,285	521,964
1923	10,613,881	748,105
1924	7,528,004	607,134
1925	13,583,173	977,271
1926	24,602,425	1,685,800
1927	32,722,818	2,060,632
1928	26,510,889	1,671,429
1929	35,850,370	2,234,368

58-Year Record of Imports into the United States, 1871-1929

The following tables, compiled from official records, give import data, quantity and value for fiscal years to June 30, for all years for which figures are available, down to 1929. Where figures are missing for any of the years indicated, it is due to the fact that official records were not kept, and the figures are, therefore, unavailable.

Abrasives, Pumice Stone, Unmanufactured

	Tons.	Dollars.
1871	.....	6,448
1881	.....	19,052
1891	.....	52,414
1901	.....	28,618
1913	5,558	44,474
1914	7,065	57,427
1915	6,060	47,469
1916	8,650	69,311
1917	7,205	76,620
1918	3,900	54,062
1919	1,139	17,196
1920	10,933	145,984
1921	4,488	64,213
1922	5,728	59,603
1923	10,339	72,867
1924	8,551	76,035
1925	8,663	88,954
1926	9,775	103,658
1927	7,791	85,797
1928	8,470	94,922
1929	8,977	104,534

Abrasives, Pumice Stone, Wholly or Partially Manufactured

	Pounds.	Dollars.
1913	3,845,326	17,417
1914	6,484,875	28,280
1915	6,013,747	27,152
1916	5,616,012	44,186
1917	7,796,173	64,865
1918	3,238,776	34,262
1919	1,746,024	23,168
1920	6,303,302	63,853
1921	6,783,635	79,727
1922	3,871,541	28,457
1923	7,131,452	54,603
1924	5,224,781	37,231
1925	4,410,794	27,017
1926	6,728,267	38,344
1927	5,495,796	31,703
1928	5,999,319	40,829
1929	7,952,914	41,852

Abrasives, Rottenstone

	Tons.	Dollars.
1919	13	1,486
1920	461	6,125
1921	90	4,747
1922	62	4,306

Not stated after 1922.

Abrasives, Rottenstone, Tripoli and Diatomaceous Earths

	Tons.	Dollars.
1881	.....	3,848
1891	.....	.....
1901	.....	24,556
1913	.....	30,621
1914	.....	20,858
1915	.....	24,796
1916	.....	38,613
1917	.....	23,315
1918	.....	14,551
1923	.....	13,759
1924	300	12,639
1925	147	5,791
1926	171	8,316
1929	2,583	24,721

Stated separately 1919 to 1922.

Abrasives, Tripoli

	Tons.	Dollars.
1919	247	7,232
1920	411	8,483
1921	324	9,423
1922	320	7,918

Not stated after 1922.

Acenaphthene, Fluorene, Methyl-anthracene and Methyl-naphthalene

	Pounds.	Dollars.
1920	15,759	946
1921	.....	.....
1922	100	64
1923	23,739	2,843
1924	.....	.....
1925	.....	.....
1926	20,000	1,457
1927	52,224	13,791
1928	55,272	16,358
1929	44,237	11,704

Acetaldehyde

	Pounds.	Dollars.
1924	64,822	10,815
1925	107,344	18,114
1926	321,125	48,400
1926	323,125	48,400
1927	122	57
1928	583	128
1929	12,727	2,012

Acetanilide, Medicinal, Acetphenetidin and Acetylsalicylic Acid

	Pounds.	Dollars.
1914	1,060	164
1915	800	389
1916	.....	.....
1917	15	22
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	10	16
1922	20	12
1923	20	32
1924	38	50
1925	13	26
1926	95	175
1927	974	2,501
1928	981	1,451
1929	500	700

Acetanilide, Not Medicinal

	Pounds.	Dollars.
1927	3,268	1,348
1928	.....	.....
1929	.....	.....

Acetone, Acetone Oil, and Ethyl Methyl Ketone

	Pounds.	Dollars.
1914	2,760	307
1915	235,917	21,105
1916	179,497	14,424
1917	.....	.....
1918	148,082	26,910
1919	443,504	80,986
1920	.....	.....
1921	6,654	311
1922	155	57
1923	44,099	6,910
1924	63,724	9,088
1925	357,896	43,766
1926	325,274	33,803
1927	286,223	28,698
1928	55,862	6,541
1929	68,703	6,727

Acetphenetidin (Phenacetin)

	Pounds.	Dollars.
1915	39,990	27,356
1916	203	1,532
1917	3,280	40,352
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	25	238
1925	300	1,020

Included in "Acetanilide, Medicinal," etc., after 1925.

Acid, Acetic Anhydride

	Pounds.	Dollars.
1913	309,645	51,632
1914	150,892	23,240
1915	3,652	1,019
1916	18,177	10,013
1917	9,060	7,485
1918	13,112	16,533
1919	10,948	14,780
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	2,350	638
1924	3,746	1,141
1925	6,208	1,728
1926	129,953	24,274
1927	50,027	12,315
1928	2,217	438
1929	20,596	4,367

Acid, Acetic or Pyroligneous

	Pounds.	Dollars.
1871	146	120
1881	4,223	942
1891	10,946	1,036
1901	291,801	21,182
1913	39,648	3,036
1914	27,750	1,952
1915	312,850	16,419
1916	504,858	53,969
1917	201,604	28,492
1918	264,997	47,673
1919	1,252,649	224,482
1920	2,925,076	339,178
1921	859,755	108,090
1922	21,774	17,104
1923	269,960	31,325
1924	1,266,548	136,865
1925	2,108,787	239,298
1926	4,519,465	325,703
1927	9,660,854	673,046
1928	12,176,580	944,611

See following classes for figures after 1928.

Acid, Acetic, or Pyroligneous, Containing More Than 65% Acetic Acid

	Pounds.	Dollars.
1929	7,416,586	796,755

Acid, Acetic, or Pyroligneous, Containing Not More Than 65% Acetic Acid

	Pounds.	Dollars.
1929	19,896,196	1,165,029

Acid, Acetylsalicylic (Aspirin)

	Pounds.	Dollars.
1914	22,841	11,873
1915	112,602	53,792
1916	229	311
1917	501	2,136
1918	1,100	3,300
1919	26	76
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	1	7
1925	.....	.....

Included in "Acetanilide, Medicinal," etc., after 1925.

Acid, Aminosalicylic

	Pounds.	Dollars.
1920	11,199	8,182
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....

Not stated after 1925.

Acid, Arsenic

	Pounds.	Dollars.
1924	110,456	11,174
1925	28,200	1,512
1926	33,402	1,354
1927	210	71
1928	11,525	425
1929	100	37

Acid, Arsenious, or White Arsenic

	Pounds.	Dollars.
1882	52,572	2,285
1891	.....	.....
1901	497,916	20,486
1913	5,164,768	203,525
1914	3,034,351	110,179
1915	2,789,531	106,530
1916	2,458,694	104,988
1917	1,984,480	159,429
1918	3,746,246	384,964
1919	7,074,429	611,398
1920	5,809,178	414,867
1921	6,733,163	511,098
1922	1,694,142	109,169
1923	13,235,646	1,225,961
1924	22,007,134	2,062,936
1925	17,363,079	1,187,249
1926	14,422,716	538,782
1927	23,754,152	794,023
1928	21,088,785	814,822
1929	24,170,968	807,907

Acid, Benzoic, Medicinal

	Pounds.	Dollars.
1871	.....	5,571
1881	8,813	13,299
1891	.....	.....
1901	262,697	93,667
1913	863,015	133,887
1914	278,896	51,701
1915	132,666	25,442
1916	25,155	79,856
1917	13,547	52,988
1918	2,354	16,390
1919	125	1,114
1920	313	1,461
1921	240	165
1922	11,023	2,847
1923	200	775
1924	111	168
1925	431	279
1926	230	200
1927	261	157
1928	300	181
1929	319	195

Acid, Boric

	Pounds.	Dollars.
1871	1,204,049	185,477
1881	187,053	15,771
1891	666,865	40,919
1901	648,994	23,485
1913	362,400	13,897
1914	527,201	22,390
1915	401,684	18,002
1916	424,219	22,145
1917	404,210	24,590
1918	195,650	14,087
1919	280,935	31,170
1920	253,958	11,165
1921	227,461	19,049
1922	1,046,926	82,785
1923	430,677	29,146
1924	259,837	14,640
1925	335,583	19,663
1926	202,593	13,593
1927	202,780	12,212
1928	279,298	15,404
1929	174,970	7,472

Acid, Carbolic

	Pounds.	Dollars.
1871	.....	8,671
1881	115,691	48,691
1891	1,140,924	134,234
1901	1,808,026	260,851

Stated separately for later years.

Acid, Carbolic (Not Phenol)

	Pounds.	Dollars.
1917	495,813	34,355
1918	127,574	11,198
1919	2,021,165	194,589
1920	157,319	18,243
1921	183,709	20,906
1922	315,406	31,675

Not stated after 1922.

Acid, Carbolic (Phenol)

	Pounds.	Dollars.
1913	8,345,631	688,771
1914	8,393,216	531,535
1915	3,106,445	179,685
1916	2,246,256	154,841
1917	772,667	66,878
1918	560,276	62,326
1919	95,861	31,903
1920	30	14
1921	1,260	372
1922	.....	361
1923	623,229	87,833

Stated separately after 1923.

Acid, Carbolic (Phenol) Crystal

	Pounds.	Dollars.
1924	151,421	41,271
1925	139,346	32,446
1926	297,332	66,455
1927	62,255	12,923
1928	1,033	197
1929	433,386	44,304

Acid, Carbolic (Cresol) Liquid

	Pounds.	Dollars.
1924	2,815	257
1925	429,239	43,080
1926	46,882	11,695
1927	26,753	5,636
1928	1,074,041	68,074
1929	1,657,574	134,942

Acid, Chloroacetic

	Pounds.	Dollars.
1927	50	20
1928	5	6
1929	.....	.....

Acid, Chromic and Anhydrides

	Pounds.	Dollars.
1871	.....	5
1881	124	89
1891	.....	1,742
1901	46,993	9,881
1913	8,522	1,682
1914	7,778	1,220
1915	6,505	1,394
1916	.....	.....
1917	.....	.....
1918	9,512	1,857
1919	.....	.....
1920	.....	.....
1921	1,100	90
1922	3,969	1,269
1923	7,020	2,481
1924	475	405
1925	34,976	3,455
1926	6,461	2,511
1927	10,174	4,120
1928	37,693	12,764
1929	237,668	47,035

Acid, Cinnamic

	Pounds.	Dollars.
1924	112	389
1925	.....	.....

Not stated after 1925.

Acid, Citric

	Pounds.	Dollars.
1871	184,662	105,816
1881	38,983	19,750
1891	45,197	15,482
1901	76,805	23,039
1913	8,677	2,916
1914	652,210	204,347
1915	722,434	447,131
1916	171,877	107,603
1917	157,628	91,463
1918	196,590	125,066
1919	680,147	632,294
1920	1,621,577	1,426,195
1921	770,331	632,780
1922	1,624,892	609,198
1923	575,541	199,522
1924	907,250	263,086
1925	362,341	98,129
1926	292,470	81,753
1927	171,361	44,966
1928	4,759	1,148
1929	670	280

Acid, Cresylic

	Pounds.	Dollars.
1926	3,632,457	195,182
1927	8,742,825	518,817
1928	9,478,406	613,915
1929	12,747,062	729,328

Acid, Diethylbarbituric and Derivatives

	Pounds.	Dollars.
1928	26,074	216,111
1929	26,531	216,340

Acid, Fluoric (Hydrofluoric)

	Pounds.	Dollars.
1901	242	15
1913	12	8
1914	305	22
1915	150	11
1916	17	33
1917	.....	.....
1918	1	3
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	40	9
1924	157	32
1925	.....	.....
1926	10	8
1927	.....	.....
1928	61	70
1929	.....	.....

Acid, Formic

	Pounds.	Dollars.
1913	502,685	22,414
1914	1,119,745	48,826
1915	534,895	30,641
1916	131,719	19,627
1917	385,463	95,074
1918	.....	.....
1919	.....	.....
1920	210,021	46,922
1921	413,867	66,775
1922	124,964	11,219
1923	1,145,046	82,228
1924	1,290,637	106,688
1925	1,459,354	106,761
1926	2,086,914	131,643
1927	2,879,023	201,847
1928	2,575,336	194,814
1929	2,132,683	166,440

Acid, Gallic

	Pounds.	Dollars.
1871	50	70
1881	16	31
1891	.....	.....
1901	21,461	9,704
1913	51,326	17,086
1914	61,635	20,429
1915	41,558	14,992
1916	5,101	1,965
1917	.....	.....
1918	8,643	9,706
1919	22	26
1920	.....	.....
1921	.....	.....
1922	7,750	3,291
1923	6,048	2,742
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Acid, Glycerophosphoric, Salts and Compounds

	Pounds.	Dollars.
1914	24,789	23,066
1915	15,933	17,678
1916	7,668	8,242
1917	5,853	9,249
1918	961	1,884
1919	2,630	6,967
1920	7,143	12,451
1921	8,287	10,229
1922	3,264	2,716
1923	18,952	18,524
1924	42,808	59,400
1925	47,626	54,350
1926	65,266	56,013
1927	47,282	49,780
1928	39,808	47,132
1929	27,013	50,433

Acid, Hydrochloric (Muriatic)

	Pounds.	Dollars.
1871	.....	3,595
1881	.....	.....
1891	.....	.....
1901	16,278	430
1913	440	14
1914	254,480	1,450
1915	3,532,076	20,884
1916	4,215,491	27,292
1917	1,108,808	8,191
1918	2,254,210	18,449
1919	3,648,095	37,989
1920	4,454,308	56,828
1921	4,101,080	48,584
1922	7,015	491
1923	154,033	1,502
1924	905,900	8,440
1925	845,227	7,232
1926	1,652,800	10,318
1927	102,495	956
1928	364,050	2,094
1929	1,040,803	5,260

Imports Into the United States

Acid, Lactic

	Pounds.	Dollars.
1913	158,754	19,029
1914	276,237	30,423
1915	143,291	26,787
1916	17,845	10,930
1917	100	160
1918	330	544
1919	.....	.....
1920	17,939	6,517
1921	301,784	77,342
1922	682,392	55,027
1923	182,320	23,792

Subdivided after 1923.

Acid, Lactic, Containing Less Than 30% of Lactic

	Pounds.	Dollars.
1925	12,255	4,354
1926	31,847	3,958
1927	.....	.....
1928	.....	.....
1929	.....	.....

Acid, Lactic, Containing 30% to 55% of Lactic

	Pounds.	Dollars.
1924	192,108	10,963
1925	258,830	13,145
1926	613,873	45,615
1927	404,828	27,559
1928	216,967	14,366
1929	73,146	5,614

Acid, Lactic, Containing 55% or More of Lactic

	Pounds.	Dollars.
1924	58,897	12,375
1925	118,946	36,065
1926	77,534	24,956
1927	234,399	76,391
1928	237,538	71,984
1929	295,393	87,808

Acid, Nitric

	Pounds.	Dollars.
1871	.....	2,278
1881	.....	45
1891	.....	.....
1901	45,857	934
1913	100	8
1914	.....	.....
1915	356,558	17,776
1916	234,999	11,487
1917	13	2
1918	9,444,028	665,071
1919	8,000,867	589,501
1920	.....	.....
1921	47,754	4,180
1922	23,545	1,970
1923	76,620	3,949
1924	.....	.....
1925	2,067	372
1926	447,058	3,089
1927	1	2
1928	135,715	5,685
1929	508,401	21,065

Acid, Nitric and Sulphuric Mixed

	Pounds.	Dollars.
1926	226,472	1,364
1927	150	25
1928	.....	.....
1929	.....	.....

Acid, Oleic or Red Oil

	Pounds.	Dollars.
1924	30,488	4,059
1925	41,943	5,334
1926	31,693	4,257
1927	65,573	6,989
1928	50,273	6,052
1929	86,507	10,124

Acid, Oxalic

	Pounds.	Dollars.
1871	414,044	61,613
1881	833,407	69,908
1891	2,743,222	200,595
1901	5,622,909	300,879
1913	8,046,380	402,960
1914	8,780,857	433,783
1915	4,496,679	262,422
1916	522,549	166,117
1917	1,183,256	527,827
1918	757,555	311,290
1919	456,698	154,041
1920	1,375,550	372,982
1921	1,824,867	482,758
1922	22,715	3,314
1923	2,839,217	228,285
1924	2,397,579	169,591
1925	3,196,643	156,608
1926	2,028,302	88,392
1927	1,845,723	89,150
1928	1,200,222	69,091
1929	736,184	37,902

Acid, Phenylglycinorthocarboxylic

	Pounds.	Dollars.
1924	17,376	74,492
1925	.....	.....

Not stated after 1925.

Acid, Phosphoric

	Pounds.	Dollars.
1901	175,910	31,841
1913	504,383	76,907
1914	528,827	63,222
1915	265,193	39,120
1916	71,568	12,937
1917	13,666	4,225
1918	17,711	7,644
1919	6,431	4,186
1920	80,160	27,837
1921	253,700	68,189
1922	197,994	36,941
1923	358,573	45,043
1924	125,350	12,794
1925	201,323	20,182
1926	118,259	13,862
1927	503,532	53,132
1928	555,821	57,324
1929	204,472	22,839

Acid, Phthalic

	Pounds.	Dollars.
1901	31,336	17,560
1913	75,695	20,511
1914	63,574	15,597
1915	17,925	4,498
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	2,205	619
1924	.....	.....
1925	.....	.....

Not stated after 1925.

Acid, Pyrogallic

	Pounds.	Dollars.
1901	.....	37,789
1913	9,512	9,278
1914	23,615	20,496
1915	10,564	9,514
1916	169	227
1917	.....	.....
1918	275	547
1919	.....	.....
1920	.....	.....
1921	899	2,094
1922	11	20
1923	232	393
1924	11	24
1925	11	21
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Acid, Salicylic, and Salts of, Not Medicinal

	Pounds.	Dollars.
1924	1,100	847
1925	1,757	521

Not stated after 1925.

Acid, Salicylic, and Salts of, Medicinal

	Pounds.	Dollars
1901	222,761	76,786
1913	31,844	6,500
1914	18,821	4,425
1915	82,617	24,402
1916	160	386
1917	5,033	3,114
1918	21,354	20,883
1919	5	2
1920	.....	.....
1921	.....	.....
1922	2,240	1,775
1923	43	113
1924	4	55
1925	561	640
1926	137	3,343
1927	94	637
1928	201	1,377
1929	332	978

Acid, Silicic

	Pounds.	Dollars.
1901	25	3
1913	121,344	6,486
1914	.....	.....
1915	5,086	586
1916	15	6
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	110	17
1922	210	32
1923	100	17

Not stated after 1923.

Acid, Stearic

	Pounds.	Dollars
1891	.....	2,638
1901	.....	.....
1913	110,619	12,160
1914	100,088	9,593
1915	32,795	3,465
1916	40,979	6,029
1917	538	75
1918	.....	.....
1919	.....	.....
1920	4,044	867
1921	12,662	1,750
1922	25,919	2,170
1923	352,150	37,694
1924	292,705	34,506
1925	445,686	58,754
1926	2,391,330	296,741
1927	603,926	71,764
1928	1,365,473	137,029
1929	5,667,783	702,233

Acid, Sulphuric, or Oil of Vitriol

	Pounds.	Dollars.
1871	8,509	642
1881	3,841	276
1891	15,377	836
1901	79,120	2,335
1913	34,624	512
1914	6,725,999	40,559
1915	7,382,139	44,068
1916	6,286,490	61,352
1917	667,008	6,617
1918	2,822,527	358,904
1919	11,339,480	100,489
1920	9,221,723	79,204
1921	19,365,450	93,937
1922	4,915,213	54,727
1923	18,362,693	158,244
1924	17,196,506	144,376
1925	20,154,302	146,841
1926	50,797,446	327,953
1927	45,050,353	249,312
1928	26,663,772	154,495
1929	25,466,300	162,105

Acid, Tannic, Containing Less Than 50% Tannic

	Pounds.	Dollars.
1925	27,199	3,828
1926	87,907	14,830
1927	62,522	8,023
1928	46,610	7,148
1929	77,232	11,859

Acid, Tannic, Not Medicinal, 50% or More Tannic

	Pounds.	Dollars
1925	41,284	10,661
1926	63,421	16,698
1927	122,857	33,601
1928	49,905	13,863
1929	33,024	9,559

Acid, Tannic, Medicinal, 50% or More Tannic

	Pounds.	Dollars.
1871	21	26
1881	1,041	469
1891	659	239
1901	2,007	1,092
1913	1,540	768
1914	12,892	4,326
1915	49,493	17,047
1916	2,229	684
1917	160	41
1918	5,442	1,424
1919	96,831	41,675
1920	33,458	20,169
1921	46,934	21,735
1922	19,518	8,236
1923	88	75
1924	3	10
1925	.....	.....
1926	.....	.....
1927	1,120	491
1928	75	91
1929	350	197

Acid, Tartaric

	Pounds.	Dollars.
1871	288,525	85,830
1881	64	33
1891	1,511	468
1901	1,068	299
1913	78,942	15,747
1914	848,575	203,850
1915	820,105	273,880
1916	198,873	84,373
1917	268,180	162,478
1918	384,262	231,009
1919	321,256	218,441
1920	798,667	529,231
1921	2,103,131	1,004,349
1922	3,074,283	756,696
1923	1,878,891	454,047
1924	3,249,082	720,690
1925	2,783,088	568,909
1926	2,847,958	578,890
1927	2,250,908	467,727
1928	1,889,277	514,780
1929	1,968,770	628,564

Acid, Valerianic

	Pounds.	Dollars.
1901	1,172	818
1913	1,019	860
1914	1,161	750
1915	2,163	1,774
1916	600	399
1917	50	491
1918	845	5,011
1919	.....	.....
1920	700	2,278
1921	435	1,342
1922	.....	.....
1923	540	827
1924	.....	.....
1925	222	352
1926	62,685	6,699
1927	725	1,057
1928	2,532	2,364
1929	2,031	2,876

Acids and Acid Anhydrides, Not Specially Provided For

	Pounds.	Dollars.
1871	.....	93,273
1881	.....	350,080
1891	.....	380,054
1901	.....	42,838
1913	.....	86,539
1914	.....	94,078
1915	.....	73,848
1916	.....	36,430
1917	.....	85,257
1918	.....	510,091
1919	14,025	58,915
1920	52,758	25,200
1921	106,746	28,096
1922	226,956	57,361
1923	1,306,932	92,725
1924	116,701	15,202
1925	96,839	21,639
1926	1,403,585	196,723
1927	858,567	131,375
1928	505,668	103,485
1929	367,462	108,871

Aconite, Crude

	Pounds.	Dollars.
1871	19,591	1,586
1881	5,883	455
1891	2,761	266
1901	1,130	113
1913	12,946	1,065
1914	4,267	321
1915	8,821	962
1916	6,720	538
1917	34,285	8,724
1918	475	119
1919	22,320	4,462
1920	31,471	8,881
1921	10,854	2,452
1922	10,645	1,367
1923	25,464	5,262
1924	37,330	10,775
1925	21,730	5,340
1926	25,724	4,568
1927	115,963	31,613
1928	27,320	3,970
1929	31,340	4,312

Acorns, Crude

	Pounds.	Dollars.
1913	7,165	210
1914	3,613	208
1915	4,395	198
1916	.....	.....
1917	2,420	41
1918	550	36
1919	.....	.....
1920	22,680	900
1921	1,048	98
1922	.....	.....
1923	.....	.....
1924	1,784,481	65,122
1925	4,006,771	142,471
1926	3,670,800	116,918
1927	2,292,358	59,148
1928	190,269	17,350
1929	593,554	33,334

Acorns, Ground or Prepared

	Pounds.	Dollars.
1925	805,675	35,984
1926	463,025	19,787
1927	656,962	29,560
1928	973,881	41,629
1929	1,150,293	51,450

Agar-Agar

	Pounds.	Dollars
1914	189,232	54,319
1915	344,119	92,809
1916	332,931	110,410
1917	431,622	162,527
1918	246,988	91,442
1919	338,307	172,832
1920	443,116	247,404
1921	199,584	98,722
1922	417,979	185,139
1923	372,380	337,876
1924	412,113	435,236
1925	525,038	499,479
1926	372,368	291,341
1927	428,295	285,556
1928	400,950	261,014
1929	438,427	341,472

Albumen, Egg or Blood

	Pounds.	Dollars.
1871	.....	135,017
1881	.....	215,555
1891	.....	119,441
1901	396,314	110,702
1913	1,246,744	406,594
1914	1,574,271	487,905

Stated separately after 1914; see following classes.

Albumen, Egg, Dried

	Pounds.	Dollars.
1915	1,269,398	402,996
1916	1,670,996	751,976
1917	2,669,254	1,443,936
1918	3,727,998	2,450,143
1919	1,427,240	1,141,431
1920	4,716,241	5,184,229
1921	2,568,240	2,606,352
1922	2,911,347	1,494,659
1923	2,371,447	1,302,156
1924	3,172,794	1,939,708
1925	3,147,661	2,280,208
1926	3,421,869	2,676,698
1927	3,777,481	2,516,184
1928	2,833,957	1,743,475
1929	3,260,519	1,587,883

Albumen, Egg, Frozen or Otherwise Prepared

	Pounds.	Dollars.
1915	691,081	92,307
1916	1,451,376	201,509
1917	2,989,685	316,762
1918	2,014,629	250,132
1919	1,744,511	197,658
1920	2,875,639	587,368
1921	4,461,999	618,953
1922	3,844,804	475,976
1923	3,039,965	500,341
1924	1,328,892	163,901
1925	2,925,570	348,831
1926	3,879,912	471,930
1927	3,102,312	429,039
1928	847,628	129,317
1929	1,023,175	122,368

Albumen, Not Otherwise Provided For

	Pounds.	Dollars.
1913	15,831	3,421
1914	382,589	58,175
1915	258,057	48,941
1916	81,787	25 615
1917	106,200	34,057
1918	671	266
1919	1,242	768
1920	37,030	21,395
1921	7,651	3,707
1922	103,481	31,130
1923	186,315	51,212
1924	218,756	47,036
1925	150,527	50,216
1926	198,288	73,809
1927	294,573	101,226
1928	258,357	62,699
1929	243,613	68,240

Alcohol, Amyl

	Pounds.	Dollars.
1924	26,508	12,377
1925	53,075	17,505
1926	5,354	2,105
1927	4,307	1,173
1928	8,176	2,627
1929	7,175	2,292

Alcohol, Butyl

	Pounds.	Dollars.
1924	896,265	201,698
1925	974,047	213,176
1926	1,489,113	239,894
1927	17,428	2,619
1928	34,816	7,048
1929	24,536	4,738

Alcohol, Ethyl (Pure Grain)

	Proof gallons.	Dollars.
1891	8,794	7,623
1901	.....	.....
1913	135,250	22,780
1914	109,330	19,365
1915	40,532	5,707
1916	59,198	7,285
1917	4	8
1918	69	20
1919	290	289
1920	.....	.....
1921	27	34
1922	.....	.....
1923	3	2
1924	.....	.....
1925	8	10
1926	.....	.....
1927	120	648
1928	190	855
1929	4,663	11,835

Alcohol, Ethyl (Denatured) Product of Virgin Islands

	Proof gallons.	Dollars.
1927	60,536	32,500
1928	165,960	120,965
1929	40,006	27,289

Alcohol, Ethyl (Denatured) from Other Countries

	Proof gallons.	Dollars.
1926	375	260
1927	.....	.....
1928	3,125	1,950
1929	2,723	708

Alcohol, Methyl

(See Methanol)

Alcohol, Propyl

	Pounds.	Dollars.
1925	32,433	11,692
1926	8,623	2,954
1927	40,079	9,157
1928	14,397	2,920
1929	26,686	5,659

Aldol or Acetaldol

	Pounds.	Dollars.
1927	220	44
1928	70	15
1929	.....	.....

Alizarin, Natural or Artificial, and Dyes Derived Therefrom

	Pounds.	Dollars.
1881	.....	598,536
1891	344,492	674,919
1901	4,046,986	713,392
1913	8,219,087	1,824,973
1914	806,764	246,196

Stated as following class after October 3, 1913.

Alizarin and Derivatives, Natural or Synthetic, and Dyes Derived from

	Pounds.	Dollars.
1914	1,828,074	599,648
1915	5,992,878	1,586,367
1916	71,834	44,282
1917	99,057	127,240

Stated separately after 1917.

Imports Into the United States

Alizarin Assistant, Etc., and Soaps Containing Castor Oil, Etc.

	*Pounds.	Dollars.
1891	1,469	818
1901	24,716	11,335
1913	137,187	62,923
1914	186,234	72,430
1915	48,376	18,820
1916	7,382	4,134
1917	5,193	5,010
1918	24	24
1919	47,008	32,121
1920	27	29
1921	1,147	711
1922	1,187	708
1923	15,802	1,855
1924	29,310	2,319
1925	24,879	2,119
1926	40,538	5,017
1927	225,857	7,460
1928	98,757	4,841
1929	78,948	7,142

* Quantity stated in gallons prior to 1923.

Alizarin, Natural

	Pounds.	Dollars.
1918	115,133	160.775
1919	1,741	5,155
1920	4,943	3,457
1921	77,551	62,404
1922	62,928	116,773
1923	14,795	25,323
1924	8,286	12,754
1925	2,961	9,531
1926	3,372	5,022
1927	1,129	1,498
1928	.....	.....
1929	17,518	21,827

Alizarin, Synthetic

	Pounds.	Dollars.
1918	19,180	55.179
1919	.....	.....
1920	58,810	18,785
1921	122,246	45,221
1922	36,736	18,510
1923	15,175	17,052
1924	.....	.....
1925	3,002	12,008
1926	.....	.....
1927	1,406	711
1928	25	48
1929	.....	.....

Alizarin Colors or Color Lakes

	Pounds.	Dollars.
1918	2,540	11,208
1919	6,284	9,121
1920	19,634	17,161
1921	144,076	204,859
1922	61,452	46,411

Not stated after 1922.

Alizarin Dyes

	Pounds.	Dollars.
1918	2,759	19,698
1919	4,025	3,397
1920	19,393	9,475
1921	89,011	117,983
1922	328,900	529,562

Not stated after 1922.

Alizarin Colors and Dyes, etc.

	Pounds.	Dollars.
1923	246,550	385,490
1924	259,589	322,611
1925	19,668	34,616
1926	25,651	62,654
1927	48,520	48,246
1928	5,410	5,560
1929	102	163

Aloes, Crude

	Pounds.	Dollars.
1871	204,272	25,710
1881	171,303	24,878
1891	372,764	22,532
1901	841,130	29,048
1913	909,279	77,938
1914	918,402	64,983
1915	953,186	90,081
1916	1,597,811	152,146
1917	1,236,381	97,607
1918	1,230,595	95,846
1919	1,544,940	127,857
1920	1,771,344	178,048
1921	966,423	78,456
1922	955,009	58,454
1923	1,528,792	82,264
1924	901,698	80,616
1925	1,182,430	96,557
1926	1,148,548	102,564
1927	1,189,742	107,312
1928	1,087,884	117,210
1929	1,155,202	156,303

Althea or Marshmallow Flowers and Leaves, Crude

	Pounds.	Dollars.
1913	561	27
1914	.....	.....
1915	4,695	245
1916	8,161	1,126
1917	21,713	2,033
1918	10,779	1,239
1919	4,869	770
1920	48,525	10,596
1921	13,699	1,524
1922	.....	.....
1923	17,122	1,329
1924	9,282	439
1925	4,424	282
1926	10,287	909
1927	13,413	1,118
1928	15,724	1,378
1929	5,780	667

Althea or Marshmallow Root, Crude

	Pounds.	Dollars.
1913	4,270	538
1914	6,049	514
1915	6,645	1,209
1916	7,242	1,926
1917	23,120	5,846
1918	24,246	6,824
1919	12,519	5,316
1920	63,099	17,309
1921	25,493	5,491
1922	3,710	493
1923	2,113	232
1924	7,773	1,327
1925	17,515	1,892
1926	10,599	1,883
1927	14,362	2,949
1928	10,697	2,015
1929	15,511	2,407

Althea or Marshmallow Root, Leaves and Flowers Advanced in Value

	Pounds.	Dollars.
1928	15,955	4,086
1929	16,932	3,368

Alumina Hydroxide (Refined Bauxite)

	Pounds.	Dollars.
1901	4,584,477	199,950
1913	2,252,156	37,812
1914	1,639,027	26,328
1915	202,968	3,680
1916	418	260
1917	.....	.....
1918	94,278	7,562
1919	.....	.....
1920	.....	.....
1921	2,549	963
1922	15,816	569
1923	2,083,043	57,328
1924	672,629	35,655
1925	543,093	40,847
1926	445,584	29,246
1927	210,065	17,304
1928	241,584	16,086
1929	509,414	24,372

Alum, Alum Cake, Patent Alum, Sulphate of Alumina and Aluminous Cake

	Pounds.	Dollars.
1871	4,712,840	74,450
1881	2,086,950	22,331
1891	4,652,985	58,864
1901	2,120,119	21,179
1913	4,129,160	39,944
1914	4,119,481	47,759
1915	3,904,561	41,166
1916	2,482,663	45,491
1917	1,636,989	56,748
1918	906,798	32,779
1919	220,967	7,915
1920	1,062,041	37,777
1921	3,069,682	71,135
1922	3,795,551	71,721
1923	2,750,253	48,192

Stated separately after 1923

Aluminum Sulphate, Alum Cake, or Aluminous Cake

	Pounds.	Dollars.
1924	197,085	3,141
1925	1,577,174	17,661
1926	1,929,100	20,704
1927	1,677,660	21,996
1928	1,093,744	11,685
1929	1,647,872	17,010

Aluminum, Crude, Scrap, and Alloy

	Pounds.	Dollars.
1871	.....	341
1881	517	6,071
1891	10,383	15,582
1901	62,342	29,198
1913	26,642,112	4,247,580
1914	16,421,076	2,801,911
1915	13,925,919	2,364,044
1916	8,203,895	1,823,106
1917	1,904,000	558,897
1918	1,503,360	480,782
1919	5,548,784	1,748,691
1920	30,853,386	9,595,122
1921	35,626,274	9,015,422
1922	24,697,080	4,805,767
1923	47,619,231	8,541,049
1924	36,923,348	6,609,026
1925	26,191,182	5,998,045
1926	66,470,355	15,430,256
1927	67,666,489	15,072,461
1928	51,787,740	10,848,665
1929	43,250,854	5,485,421

Aluminum Leaf

	*Leaves (5½x5½ inches)	Dollars.
1891	9,768	1,109
1901	102	66
1913	3,531	1,811
1914	1,385	141
1915	15,249	1,901
1916	39,920	5,466
1917	19,161	3,706
1918	50,880	11,636
1919	95,475	19,445
1920	118,159	25,572
1921	243,510	65,759
1922	87,359	10,143
1923	362,266	27,583
1924	183,149	22,563
1925	21,153,667	29,535
1926	26,854,330	38,968
1927	23,265,671	31,818
1928	19,969,360	28,453
1929	26,482,352	37,444

* Quantity stated as 100 leaves prior to 1925.

Aluminum Foil

	Pounds.	Dollars.
1924	20,553	17,466
1925	31,932	22,473
1926	135,036	109,615
1927	477,149	252,896
1928	1,155,880	662,267
1929	1,011,279	539,062

Aluminum Powder and Powdered Foil

	Pounds.	Dollars.
1924	123,723	53,544
1925	68,891	31,784
1926	79,849	40,329
1927	104,906	42,578
1928	156,321	67,592
1929	349,674	123,161

Aluminum Salts and Compounds, N.E.S.

	Pounds.	Dollars.
1925	27,297	9,426
1926	92,206	30,983
1927	337,353	27,736
1928	226,549	15,421
1929	102,274	7,608

Ambergris Containing Less Than 10 Percent Alcohol

	Pounds.	Dollars.
1881	.....	55
1891	71	3,731
1901	27	4,266
1913	608	10,964
1914	32	695
1915	1	87
1917	160	2,771
1918	204	3,643
1919	494	1,097
1920	48	540
1921	20	916
1922	100	12,655
1923	32	4,355
1924	53	10,927
1925	211	78,868
1926	110	26,262
1927	365	56,251
1928	285	70,902
1929	354	111,937

Aminonaphthol, Aminophenol and Aminophenetol

	Pounds.	Dollars.
1919	590	1,475
1920	438	942
1921	14,623	11,699
1922	.....	.....
1923	32	4,355
1924	.....	.....
1925	.....	.....
1926	400	497
1927	.....	.....
1928	.....	.....
1929	.....	.....

Ammonia Aldehyde

	Pounds.	Dollars.
1924	20	8
1925	2,094	796
1926	910	348
1927	253	78
1928	.....	.....
1929	.....	.....

Ammonia Carbonate and Bicarbonate

	Pounds.	Dollars.
1871	1,346,448	112,303
1881	315,537	42,363
1891	912,886	62,293
1901	181,701	12,204
1913	258,376	16,173
1914	391,981	25,195
1915	784,821	49,122
1916	357,280	25,018
1917	244,840	18,264
1918	76,160	6,732
1919	85,762	15,757
1920	271,787	32,288
1921	238,820	21,897
1922	742,067	38,005
1923	742,849	43,816
1924	825,476	48,256
1925	737,544	43,723
1926	625,555	39,322
1927	671,811	42,596
1928	1,026,735	56,008
1929	1,197,590	57,378

Ammonia Chloride (Sal Ammoniac)

	Pounds.	Dollars.
1871	1,083,496	79,551
1881	1,281,867	107,976
1891	3,609,583	195,078
1901	4,772,364	245,163
1913	10,387,148	504,330
1914	9,254,539	470,566
1915	4,788,325	241,713
1916	1,965,464	122,174
1917	1,856,696	178,274
1918	1,000,262	97,994
1919	648,961	92,942
1920	5,295,692	563,130
1921	4,502,056	445,705
1922	6,647,610	338,555
1923	3,240,055	174,996
1924	4,073,043	193,574

Stated separately after 1924.

Ammonia Chloride Gray

	Pounds.	Dollars.
1925	2,230,667	100,919
1926	864,627	33,676
1927	2,039,798	79,360
1928	2,831,796	90,168
1929	5,886,654	178,487

Ammonia Chloride White

	Pounds.	Dollars.
1925	9,488,578	420,100
1926	10,014,927	403,078
1927	15,714,506	590,225
1928	8,056,984	269,114
1929	5,931,375	185,407

Ammonia, Anhydrous

	Pounds.	Dollars.
1891	14,210	5,870
1901	.....	.....
1913	.....	.....
1914	.....	.....
1915	307	35
1916	.....	.....
1917	200	46
1918	2,698	1,039
1919	.....	.....
1920	12,512	4,305
1921	14,038	6,120
1922	102	48
1923	107,844	4,203
1924	11,033	560
1925	176	26
1926	400	16
1927	.....	.....
1928	.....	.....
1929	56	12

Ammonia Nitrate

	Pounds.	Dollars.
1914	2,766,000	132,849
1915	2,274,000	193,907
1916	.....	.....
1917	87,300	4,015
1918	74,101	4,287
1919	15,755	1,871
1920	18,292,080	1,360,153
1921	28,417,403	1,823,363
1922	44,724,215	2,628,308
1923	22,732,660	1,433,472
1924	1,747,333	98,686
1925	10,077,410	266,329
1926	11,659,352	576,765
1927	10,453,895	432,537
1928	9,093,212	468,348
1929	10,961,607	424,215

Ammonia Perchlorate

	Pounds.	Dollars.
1914	70,253	6,337
1915	72,576	6,515
1916	.....	.....
1917	275	53
1918	465	165
1919	1,763	402
1920	452,358	85,649
1921	4,502,050	413,470
1922	3,888,039	298,780
1923	496,683	23,635
1924	890,735	29,046
1925	106,501	7,233
1926	448	52
1927	23,467	1,942
1928	13,467	755
1929	1,144	145

Ammonia Phosphate

	Pounds.	Dollars.
1913	7,433	493
1914	205,764	13,462
1915	71,782	5,394
1916	810	40
1917	1,000	206
1918	1,316	336
1919	.....	.....
1920	.....	.....
1921	14,232	1,787
1922	27,947	2,989
1923	409,182	38,556
1924	57,387	6,246
1925	100,480	9,922
1926	147,664	15,289
1927	491,111	23,812
1928	151,538	13,684
1929	76,621	4,779

Ammonia Sulphate

	Tons.	Dollars.
1891	9,950	483,196
1901	14,846	694,454
1913	61,113	3,660,064
1914	83,597	4,900,058
1915	64,417	3,215,139
1916	19,404	1,371,007
1917	8,176	647,271
1918	3,983	467,999
1919	1,964	288,469
1920	2,586	343,107
1921	2,537	226,300
1922	6,356	314,269
1923	1,879	121,673
1924	5,851	337,032
1925	21,188	1,198,428
1926	13,340	724,067
1927	3,470	205,568
1928	33,201	1,474,305
1929	33,128	1,423,081

Ammonia Sulphate-Nitrate

	Tons.	Dollars.
1927	12,203	815,276
1928	69,404	4,011,501
1929	63,273	3,545,219

Ammonium-Aluminum Sulphate or Ammonia Alum

	Pounds.	Dollars.
1924	254,075	4,881
1925	79,341	1,323
1926	245,812	5,026
1927	210,678	3,566
1928	155,858	3,258
1929	95,362	2,179

Anethol, Citral, Geraniol, Heliotropin, Terpineol, Etc.

	Pounds.	Dollars.
1928	211,749	62,071
1929	252,483	95,736

Anilin Oil

	Pounds.	Dollars.
1871	.....	169
1881	69,899	18,556
1891	1,489,908	299,662
1901	1,530,950	143,268
1913	2,015,318	171,047
1914	1,444,772	116,628
1915	1,407,305	240,165
1916	104,836	28,130
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	220	72
1922	11,243	1,799

Not stated after 1922.

Anilin Salts

	Pounds.	Dollars.
1881	.....	66,152
1891	.....	713,732
1901	7,575,515	589,535
1913	4,976,108	371,198
1914	3,083,467	222,728
1915	895,439	130,280
1916	16,084	3,978
1917	.....	.....
1918	21,273	3,250
1919	.....	.....
1920	.....	.....
1921	4	1
1922	18,316	12,109

Not stated after 1922.

Anilin Oil and Salts

	Pounds.	Dollars.
1923	85	231
1924	.....	.....
1925	.....	.....
1926	500	130
1927	1,440	1,404
1928	35,260	23,147
1929	6,980	5,794

Annatto, and All Extracts of

	Pounds.	Dollars.
1871	.....	32,657
1881	270,597	37,639
1891	696,429	25,724
1901	412,125	13,498
1913	405,024	19,991
1914	507,250	25,341
1915	809,903	53,174
1916	603,271	69,811
1917	669,445	78,017
1918	749,782	73,294
1919	205,059	12,549
1920	917,932	38,927
1921	697,333	25,133
1922	856,731	34,226
1923	478,479	35,702
1924	265,691	53,202
1925	496,036	65,589
1926	570,543	39,608
1927	660,490	31,377
1928	605,186	33,976
1929	445,788	35,567

Anthracene and Anthracene Oil

		Dollars.
1914	.....	32,175
1915	.....	49,949
1916	.....	2,551
1917	.....	2,258

Stated separately after 1917; see following classes.

Anthracene

	Pounds.	Dollars.
1918	.....	.....
1919	95,025	3,008

Stated separately after 1919; see below.

Anthracene, Purity Less Than 30 Percent

	Pounds.	Dollars.
1920	7,551	506
1921	197,887	17,012
1922	89,562	687
1923	240,380	8,045
1924	859,217	22,373
1925	514,561	9,394
1926	468,385	8,619
1927	23,241	589
1928	112,585	2,508
1929	22,629	1,586

Imports Into the United States

Anthracene, Purity of 30 Percent or More

	Pounds.	Dollars.
1920	39,439	7,018
1921	822,740	98,448
1922	.....	.....
1923	**2**	**2**
1924	.....	.....
1925	.....	.....
1926	**323**	**126**
1927	.....	.....
1928	.....	.....
1929	1,052	405

Anthracene Oil

	Gallons.	Dollars.
1918	11,900	2,010
1919	11,185	2,260
1920	12,694	3,284
1921	18,405	6,725
1922	8,513	2,050
1923	**26,845**	**5,401**
1924	22,995	5,670
1925	17,343	2,842
1926	14,538	2,140
1927	9,623	1,044
1928	18,004	4,107
1929	39,399	8,689

Anthracene and Carbazole Colors, and Dyes Derived Therefrom

	Pounds.	Dollars.
1917	399,300	426,198
1918	35,733	28,018
1919	65,808	82,720
1920	84,751	120,774
1921	464,042	704,954
1922	430,282	828,746
1923	285,744	305,836
1924	4,276	4,330
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	20	40

Anthraquinone, Aminoanthraquinone, Nitroanthraquinone

	Pounds.	Dollars.
1920	3,147	2,643
1921	46,327	21,422
1922	93,153	62,445
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	6,625	7,914
1927	6,808	5,705
1928	15,483	12,935
1929	22,492	15,543

Antimony Oxide, Salts and Compounds

	Pounds.	Dollars.
1913	1,819,323	97,447
1914	2,623,084	248,164
1915	1,797,265	219,605
1916	511,848	109,814
1917	192,099	46,190
1918	37,724	13,744
1919	267,885	11,378
1920	569,052	20,274
1921	315,427	18,256
1922	63,296	5,859
1923	**3,579,780**	**245,110**

Stated separately after 1923.

Antimony Oxide

	Pounds.	Dollars.
1924	2,236,424	134,072
1925	1,157,274	113,080
1926	**3,398,895**	**433,406**
1927	3,260,344	366,640
1928	3,902,078	377,694
1929	4,171,656	312,857

Antimony Sulphides, Red and Golden

	Pounds.	Dollars.
1924	147,241	26,872
1925	248,060	29,215
1926	**1,027,463**	**69,432**
1927	907,136	62,968
1928	721,457	61,528
1929	472,852	42,704

Antimony Salts and Compounds, N. E. S.

	Pounds.	Dollars.
1924	953,062	69,134
1925	989,783	83,314
1926	**356,947**	**32,714**
1927	89,015	15,135
1928	48,785	7,484
1929	124,293	16,387

Antipyrin

	Pounds.	Dollars.
1914	7,686	11,608
1915	606	1,085
1916	222	2,202
1917	6,429	46,110
1918	22,736	92,653
1919	14,487	160,902
1920	15,656	72,556
1921	3,836	16,194
1922	7,096	10,293
1923	**12,088**	**18,897**
1924	12,993	18,129
1925	10,502	11,748
1926	11,327	10,611
1927	44,984	41,323
1928	63,245	55,250
1929	75,954	63,289

Antitoxins, Vaccines, Serums, Viruses and Bacterins for Therapeutic Purposes

	Ounces.	Dollars.
1913	.....	5,032
1914	.....	19,019
1915	.....	12,826
1916	.....	8,225
1917	.....	11,460
1918	.....	6,009
1919	.....	6,076
1920	.....	6,907
1921	.....	7,314
1922	.....	2,645
1923	.....	**5,598**
1924	1,232	1,489
1925	9,823	21,016
1926	**2,707**	**2,463**
1927	6,848	16,855
1928	677	1,197
1929	1,006	1,596

Apatite

	Tons.	Dollars.
1901	152	2,004
1918	2,930	22,535
1914	92	796
1915	.....	.....
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	29	825
1920	70	2,648
1921	72	2,280
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Apricot and Peach Kernels

	Pounds.	Dollars.
1913	18,769	3,085
1914	17,800	2,862
1915	67,164	3,398
1916	11,926	2,497
1917	250,075	21,430
1918	231,465	16,932
1919	72,228	12,411
1920	22,177	9,051
1921	73,479	12,733
1922	11,217	1,343
1923	**221,462**	**9,854**
1924	706	188
1925	73,001	12,283
1926	60,478	16,651
1927	2,942	724
1928	783	121
1929	33,299	7,357

Argols or Crude Tartar, or Wine Lees, Crude

	Pounds.	Dollars.
1871	4,024,731	590,453
1881	13,712,528	2,195,420
1891	21,631,507	2,199,263
1901	29,116,816	2,527,281
1913	29,476,172	2,621,491
1914	5,712,667	545,105

Class dropped under 1913 tariff; see below.

Argols or Crude Tartar, or Wine Lees, Crude or Partly Refined (Bitartrate of Potash)

	Pounds.	Dollars.
1914	23,810,048	2,654,618
1915	28,814,957	3,122,326
1916	34,602,184	5,233,516
1917	24,142,073	3,886,854
1918	30,364,538	5,312,836
1919	32,399,932	5,336,939
1920	23,578,221	3,282,315
1921	26,569,756	3,042,334
1922	18,744,192	1,216,700
1923	**21,949,737**	**1,733,874**
1924	17,573,995	1,237,653
1925	20,646,972	1,387,637
1926	26,260,293	1,789,044
1927	22,411,194	1,749,692
1928	20,959,643	1,969,784
1929	14,151,580	1,550,633

Arnica, Crude

	Pounds.	Dollars.
1924	65,296	4,266
1925	48,019	3,674
1926	21,616	2,295
1927	23,503	4,106
1928	30,397	15,634
1929	36,724	22,532

Arrowroot

	Pounds.	Dollars.
1871	592,318	28,889
1881	69,206	8,910
1891	452,960	17,136
1901	64,601	3,908
1913	11,327	688
1914	8,615	316
1915	134	5
1916	5,987	302
1917	30,776	1,613
1918	15,998	2,998
1919	33,752	7,208
1920	1,454,626	78,347
1921	133,361	11,214
1922	1,720	229
1923	**7,166**	**877**
1924	13,404	1,842
1925	16,682	4,572
1926	20,698	3,149
1927	24,918	3,522
1928	2,620	778
1929	62,978	3,733

Arsenic, Metallic

	Pounds.	Dollars.
1924	207,308	40,501
1925	124,817	27,901
1926	**201,987**	**42,060**
1927	102,577	20,503
1928	270,160	51,938
1929	209,373	38,666

Arsenic Sulphide, Realgar, and Orpiment

	Pounds.	Dollars.
1871	1,329,693	29,822
1881	2,225,425	54,056
1891	5,343,229	161,367
1901	5,936,629	278,537
1913	8,475,592	354,284
1914	4,148,028	169,614
1915	3,981,661	178,756
1916	2,794,254	122,795
1917	2,373,701	175,811
1918	7,691,028	654,282
1919	7,088,146	563,335
1920	6,470,700	472,710
1921	8,801,293	794,215
1922	7,520,571	471,296
1923	**4,817,824**	**429,959**
1924	474,571	51,300
1925	458,092	50,180
1926	938,908	55,108
1927	485,990	35,610
1928	434,984	38,930
1929	498,639	50,396

Artists' Colors, in Tubes, Pans, Cakes, Etc.

		Dollars.
1913	.....	136,894
1914	.....	211,305
1915	.....	186,728
1916	.....	129,653
1917	.....	163,958
1918	.....	91,220
1919	.....	85,860
1920	.....	126,026
1921	.....	236,802
1922	.....	187,635
1923	.....	214,539

Subdivided after 1923.

Artists' Colors, N. E. S. Not Assembled in Sets, Kits, Etc.

	Pounds.	Dollars.
1924	134,512	140,596
1925	155,071	154,575
1926	**214,166**	**210,956**
1927	326,193	259,176
1928	325,272	260,694
1929	240,288	238,416

Artists' Colors, N. E. S. Assembled in Sets, Kits, Etc.

	Pounds.	Dollars.
1924	45,291	16,702
1925	52,898	13,166
1926	70,179	18,531
1927	59,991	19,906
1928	63,905	17,897
1929	60,638	14,038

Asafetida, Manufactured

	Pounds.	Dollars.
1929	123	79

Ashes, Wood, and Beet Root

	*Tons.	Dollars.
1871	.....	40
1881	.....	8,622
1891	.....	42,624
1901	.....	76,306
1913	.....	36,493
1914	.....	27,884
1915	.....	41,522
1916	.....	43,839
1917	.....	55,226
1918	.....	47,982
1919	7,302,539	49,276
1920	8,537,614	44,175
1921	6,212,848	38,609
1922	5,043,755	23,172
1923	**6,431,498**	**29,818**
1924	2,325	34,717
1925	1,804	20,453
1926	1,685	16,141
1927	1,478	14,957
1928	1,412	19,405
1929	554	5,585

* Quantity stated in pounds prior to 1924.

Asphalt and Bitumen

	Tons.	Dollars.
1871	4,302	14,760
1881	12,883	95,410
1891	78,039	251,137
1901	501,310	204,810
1913	188,725	750,685
1914	45,876	171,981
1915	79,561	465,717
1916	130,039	700,940
1917	161,622	896,989
1918	139,618	851,638
1919	95,214	595,786
1920	91,503	685,998
1921	128,913	1,307,290
1922	8,099	118,953
1923	**134,224**	**1,101,097**
1924	116,040	1,063,500
1925	125,456	1,071,850
1926	78,663	583,947
1927	163,844	1,359,459
1928	109,885	898,890
1929	102,034	845,683

Asphalt, Limestone-Rock

	Tons.	Dollars.
1924	3,563	24,365
1925	4,527	52,903
1926	7,521	79,814
1927	100	1,405
1928	5	95
1929	25	389

Atropine and Its Salts, Other Than Coaltar

	Ounces.	Dollars.
1924	400	840
1925	225	452

Not stated after 1925.

Balm of Gilead

	Pounds.	Dollars.
1919	380	9
1920	50	4
1921	160	90
1922	83	25
1923	**406**	**113**
1924	.....	.....
1925	551	98
1926	.....	.....
1927	.....	.....
1928	.....	.....

Balsam Copaiba, Crude

	Pounds.	Dollars.
1871	96,283	34,114
1881	143,258	67,816
1891	171,834	63,253
1901	212,082	57,018
1913	206,447	66,361
1914	245,435	71,339
1915	273,616	59,921
1916	204,464	70,868
1917	308,545	124,122
1918	373,362	202,847
1919	300,659	130,967
1920	426,071	171,398
1921	260,769	69,792
1922	239,922	42,703
1923	**223,212**	**38,408**
1924	120,411	18,509
1925	253,002	75,058
1926	161,498	40,585
1927	171,862	46,949
1928	224,086	57,776
1929	232,357	46,625

Balsam, Fir or Canada, Crude

	Pounds.	Dollars.
1871	.....	3,227
1881	15,510	3,033
1891	34,318	6,858
1901	20,728	5,948
1913	3,691	1,827
1914	13,864	12,505
1915	18,610	14,636
1916	7,113	3,934
1917	4,176	3,897
1918	3,698	1,404
1919	2,344	2,140
1920	2,763	3,570
1921	2,006	3,223
1922	1,455	1,501
1923	**3,856**	**3,889**
1924	3,794	4,120
1925	2,267	2,577
1926	4,201	4,638
1927	6,958	7,578
1928	4,156	5,500
1929	5,980	6,417

Balsam, Peru, Crude

	Pounds.	Dollars.
1871	2,237	3,878
1881	6,561	7,539
1891	10,653	13,104
1901	.....	.....
1913	48,996	61,702
1914	25,021	29,701
1915	27,506	32,735
1916	40,657	112,270
1917	58,933	175,855
1918	44,082	115,085
1919	64,879	163,568
1920	57,752	176,788
1921	50,089	98,422
1922	57,328	69,116
1923	**56,414**	**68,311**
1924	55,711	74,841
1925	55,270	74,011
1926	47,870	62,741
1927	54,525	71,806
1928	60,266	78,063
1929	64,242	88,692

Balsam, Styrax, Crude

	Pounds.	Dollars.
1891	3,432	583
1901	3,325	517
1913	35,861	5,223
1914	5,607	798
1915	11,445	1,550
1916	11,696	5,528
1917	10,892	26,550
1918	14,788	22,616
1919	.....	.....
1920	3,678	8,094
1921	30,445	67,120
1922	7,589	5,159
1923	**26,825**	**10,464**
1924	28,182	9,255
1925	44,336	14,050
1926	9,665	2,588
1927	27,792	12,218
1928	54,209	14,290
1929	42,207	9,937

Balsam, Tolu, Crude

	Pounds.	Dollars.
1871	15,275	6,516
1881	39,995	18,791
1891	54,244	12,264
1901	56,785	12,010
1913	57,277	29,552
1914	42,138	19,063
1915	39,750	13,993
1916	63,579	17,233
1917	62,820	18,255
1918	49,869	23,996
1919	58,194	44,603
1920	83,829	90,974
1921	27,871	23,101
1922	44,359	22,615
1923	**51,087**	**24,098**
1924	37,561	29,082
1925	46,627	41,393
1926	46,576	41,814
1927	42,994	28,153
1928	38,961	24,583
1929	64,685	45,668

Balsam, All Other, Crude

	Pounds.	Dollars.
1871	.....	3,267
1881	.....	315
1891	36,329	5,024
1901	54,994	29,231
1913	46,000	12,149
1914	33,311	12,410
1915	5,999	4,214
1916	2,503	1,312
1917	12,649	4,235
1918	34,773	48,560
1919	42,817	60,338
1920	17,330	8,354
1921	31,149	31,992
1922	45,271	20,657
1923	**84,048**	**38,739**
1924	22,493	17,552
1925	33,699	24,175
1926	47,764	17,475
1927	22,787	10,519
1928	17,729	10,779
1929	6,836	7,246

Barium Carbonate, Precipitated

	Pounds.	Dollars.
1913	2,182,517	20,143
1914	4,995,451	46,425
1915	344,588	7,864
1916	6	2
1917	804	177
1918	106,288	1,437
1919	.....	.....
1920	163,509	18,268
1921	1,816,693	45,859
1922	7,806,346	133,185
1923	**8,483,442**	**185,743**
1924	4,930,372	93,973
1925	10,489,859	144,489
1926	**20,604,111**	**204,975**
1927	11,161,255	128,309
1928	11,685,910	135,391
1929	6,974,442	76,117

Barium Chloride

	Pounds.	Dollars.
1913	2,926,159	26,341
1914	6,110,386	64,563
1915	4,686,029	60,532
1916	50	10
1917	6,614	608
1918	.....	.....
1919	3,290	783
1920	2,520,321	81,988
1921	2,779,966	113,695
1922	4,905,453	81,713
1923	**3,907,046**	**129,392**
1924	2,852,789	56,871
1925	4,971,295	95,613
1926	4,374,363	60,179
1927	3,447,493	52,848
1928	2,510,238	28,405
1929	890,592	10,290

Barium Dioxide (Binoxide)

	Pounds.	Dollars.
1913	3,507,508	215,500
1914	6,085,798	329,139
1915	4,084,144	317,262
1916	546,442	48,451
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	70,862	12,367
1921	684,640	89,138
1922	1,917,370	179,057
1923	**2,140,050**	**188,574**
1924	1,777,598	144,164
1925	1,580,154	91,768
1926	484,796	27,497
1927	14,407	1,445
1928	12,242	1,291
1929	409	49

Barium Hydroxide

	Pounds.	Dollars.
1924	375,553	9,792
1925	239,368	5,611
1926	225,130	5,162
1927	561,209	13,237
1928	377,799	10,073
1929	426,231	11,946

Barium Nitrate

	Pounds.	Dollars.
1924	1,184,313	75,780
1925	886,891	39,020
1926	1,450,933	58,789
1927	1,109,858	48,397
1928	1,684,300	74,038
1929	1,359,399	59,845

Barks in Crude State, Not Edible, N. E. S.

	Pounds.	Dollars.
1901	.....	15,478
1919	400,367	51,274
1920	2,772,957	175,903
1921	4,272,993	242,177
1922	2,627,953	72,092
1923	**1,644,663**	**32,591**
1924	266,523	16,020
1925	254,961	27,781
1926	**156,334**	**24,210**
1927	113,502	20,139
1928	517,993	52,462
1929	371,030	57,123

Imports Into the United States

Bark, Cinchona or Other, from Which Quinine May Be Extracted

	Pounds.	Dollars.
1871	1,286,095	697,547
1881	4,219,403	1,846,280
1891	2,672,364	301,085
1901	4,196,419	781,895
1913	3,329,978	354,593
1914	3,654,968	464,411
1915	3,951,196	561,802
1916	3,967,320	777,637
1917	2,531,397	685,936
1918	3,121,958	779,403
1919	3,866,158	803,081
1920	5,242,724	1,132,874
1921	3,566,910	1,334,758
1922	766,589	276,833
1923	**3,443,491**	**1,110,142**
1924	2,421,915	691,842
1925	2,538,989	774,252
1926	**4,203,292**	**1,198,580**
1927	2,217,951	605,872
1928	1,765,967	486,136
1929	2,060,648	561,067

Bark, Hemlock

	*Pounds.	Dollars.
1871	.....	98,207
1881	102,932	492,561
1891	57,255	274,426
1901	16,749	65,313
1913	5,502	31,965
1914	4,483	25,655
1915	3,672	19,967
1916	3,388	17,855
1917	1,118	7,027
1918	270	2,624
1919	969	9,716
1920	2,481	29,454
1921	2,838	32,248
1922	3,205	31,492
1923	**5,505**	**38,166**
1924	9,150,882	47,226
1925	5,977,624	33,808
1926	**4,561,050**	**21,043**
1927	7,454,431	33,431
1928	4,995,316	20,468
1929	5,140,518	23,066

* Quantity stated in tons prior to 1924.

Bark, Mangrove

	*Pounds.	Dollars.
1913	17,578	374,506
1914	7,743	191,472
1915	8,326	222,066
1916	21,107	581,190
1917	10,565	297,897
1918	3,529	72,956
1919	2,817	125,603
1920	2,544	109,085
1921	7,156	344,413
1922	1,668	40,857
1923	**8,906**	**199,724**
1924	1,785	36,649
1925	1,867	47,030
1926	**12,783,651**	**213,051**
1927	9,186,778	104,080
1928	17,745,929	296,451
1929	19,984,890	332,991

*Quantity stated in tons prior to 1926.

Bark, Oak

	Pounds.	Dollars.
1925	500	36
1926	**1,250**	**14**
1927	.....	.....
1928	.....	.....
1929	.....	.....

Bark, Wattle

	Pounds.	Dollars.
1924	15,123,490	190,505
1925	12,306,002	199,328
1926	**21,687,515**	**411,474**
1927	24,115,673	481,701
1928	14,521,007	381,732
1929	15,083,806	336,945

Baryta, Sulphate of, or Barytes, Unmanufactured

	Tons.	Dollars.
1871	693	9,769
1881	.....	.....
1891	2,112	4,852
1901	2,775	6,959
1913	28,358	63,345
1914	32,550	63,270
1915	9,616	21,087
1916	15	245
1917	.....	.....
1918	5	63
1919	35	245
1920	2,058	10,405
1921	23,238	156,987
1922	9,500	64,763
1923	**19,500**	**89,951**

See following classes after 1923.

Baryta, Sulphate of, or Barytes, Manufactured

	Tons.	Dollars.
1891	1,812	19,196
1901	1,802	19,795
1913	4,594	36,819
1914	5,379	42,627
1915	1,755	14,997
1916	.....	2
1917	210	4,813
1918	.....	.....
1919	.....	.....
1920	107	653
1921	509	10,519
1922	1,579	24,440
1923	**5,841**	**90,450**

See following classes after 1923.

Barytes, Crude

	Tons.	Dollars.
1924	18,752	116,534
1925	22,473	119,879
1926	**27,978**	**103,020**
1927	60,535	277,729
1928	53,867	195,806
1929	78,121	280,586

Barytes, Ground or Manufactured

	Tons.	Dollars.
1924	4,235	65,388
1925	2,602	38,551
1926	**2,667**	**38,920**
1927	3,179	45,730
1928	2,763	32,478
1929	2,415	30,159

Bauxite, Crude

	Tons.	Dollars.
1901	16,763	63,597
1913	30,863	119 848
1914	23,576	86,871
1915	12,870	50,537
1916	3,450	17,194
1917	6,403	22,568
1918	2,238	10,045
1919	2,744	10,577
1920	11,748	77,391
1921	59,135	343,909
1922	11,644	52,468
1923	**59,192**	**276,719**
1924	173,327	833,628
1925	296,153	1,415,104
1926	**316,065**	**1,311,710**
1927	309,212	1,332,289
1928	341,572	1,546,686
1929	386,198	1,699,993

Bay Leaves, Unground

	Pounds.	Dollars.
1924	55	28
1925	.....	.....
1926	**2,151**	**73**
1927	.....	.....
1928	.....	.....
1929	.....	.....

Bay Rum or Bay Water (Product of Virgin Islands)

	Pounds.	Dollars.
1928	279,953	24,226
1929	295,023	34,384

Bay Rum or Bay Water (Other Countries)

	*Pounds.	Dollars.
1913	685	707
1914	483	620
1915	503	673
1916	335	341
1917	249	278
1918	641	796
1919	1,384	2,716
1920	14,532	13,666
1921	5,700	5,829
1922	12,336	49,718
1923	**98,077**	**16,038**
1924	193,960	26,659
1925	287,429	35,965
1926	**452,909**	**50,996**
1927	187,261	19,977
1928	903	163
1929	10	4

* Quantity stated in proof-gallons prior to 1924.

Includes "Product of Virgin Islands" prior to 1928.

Beeswax, White, Bleached

	Pounds.	Dollars.
1926	361,362	155,947
1927	281,152	124,062
1928	229,131	96,689
1929	270,632	141,167

Beeswax and Other Animal Wax

	Pounds.	Dollars.
1871	16,309	3,902
1881	7,003	1,415
1891	383,725	81,920
1901	217,641	57,219
1913	828,287	254,704
1914	1,412,695	477,745
1915	1,565,338	440,047
1916	2,284,283	618,856
1917	2,711,514	904,557
1918	1,950,513	678,148
1919	2,100,458	783,716
1920	3,919,910	1,354,782
1921	2,215,332	693,551
1922	3,100,971	580,723
1923	**4,072,168**	**817,746**
1924	3,271,319	702,729
1925	**2,956,990**	**875,743**
1926	**4,428,432**	**1,489,786**
1927	4,475,642	1,591,316
1928	4,902,623	1,572,734
1929	5,073,525	1,574,575

Beet Pulp, Dried

	*Tons.	Dollars.
1920	26,531,967	537,965
1921	70,728,443	1,168,627
1922	10,878,161	79,934
1923	**33,112,240**	**547,171**
1924	27,422	791,678
1925	**39,201**	**1,158,602**
1926	**38,023**	**1,214,542**
1927	28,059	811,884
1928	15,628	469,117
1929	23,097	800,354

* Quantity stated in pounds prior to 1924.

Belladonna

	Pounds.	Dollars.
1924	143,130	19,400
1925	229,549	29,766
1926	**244,117**	**28,746**
1927	196,664	21,884
1928	335,646	37,456
1929	214,665	20,963

Benzaldehyde, Not Medicinal, Nitrobenzaldehyde

	Pounds.	Dollars.
1925	2,204	1,212
1926	**1,141**	**745**
1927	3,769	4,089
1928	2,126	1,376
1929	2,248	1,462

Benzanthrone, Benzidin Sulphate, Etc.

	Pounds.	Dollars.
1924	7	23
1925	.....	.....
1926	**5,269**	**3,585**
1927	313,197	191,764
1928	215,356	132,736
1929	119,923	63,848

Benzene (Benzol)

	Pounds.	Dollars.
	Pounds.	Dollars.
1917	3,175,906	273,108
1918	3,073,948	216,640
1919	1,509,861	88,209
1920	170,519	2,547
1921	1,717,936	42,537
1922	458,949	9,351
1924	74,100	2,363
1925	585,427	17,534
1926	**8,127,608**	**219,711**
1927	3,240,132	69,914
1928	3,874,682	85,708
1929	12,406,394	284,108

Benzyl Chloride

	Pounds.	Dollars.
1920	1,150	452
1921	.....	.....
1922	.....	.....
1925	**30**	**33**
1924	.....	.....
1925	.....	.....

Not stated after 1925.

Betanaphthol, and Benzaldehyde, Medicinal

	Pounds.	Dollars.
1919	955	716
1920	32,996	23,002
1921	2	4
1922	1,056	465
1923	**2,770**	**4,022**
1924	801	1,202
1925	**2,806**	**3,036**
1926	**1,736**	**2,672**
1927	870	1,103
1928	11	127
1929	2	5

Betel or Areca Nuts

	Pounds.	Dollars.
1925	37,152	2,471
1926	102,141	7,081
1927	160,105	14,926
1928	108,128	4,973
1929	71,215	2,887

Bismuth

	Pounds.	Dollars.
1871	.....	47,047
1881	.....	83,209
1891	116,174	210,747
1901	156,782	251,284
1913	151,030	257,176
1914	133,190	241,448
1915	34,237	72,587
1916	64,281	155,925
1917	88,465	196,113
1918	75,611	207,098
1919	76,539	218,376
1920	75,781	97,489
1921	96,692	159,670
1922	97,470	158,760
1923	**108,475**	**236,207**
1924	33,398	75,404
1925	59,051	89,203
1926	**72,741**	**185,350**
1927	65,715	153,640
1928	44,433	82,098
1929	39,691	66,800

Bismuth, Salts and Compounds

	Pounds.	Dollars.
1924	10,852	14,518
1925	692	1,522
1926	**14,188**	**17,275**
1927	11,441	16,467
1928	9,716	14,373
1929	3,803	16,541

Blanc Fixe or Precipitated Barium Sulphate

	Pounds.	Dollars.
1871	147,464	5,910
1881	11,330	2,027
1891	173,772	3,207
1901	2,328,525	28,481
1913	4,808,726	58,499
1914	4,752,474	60,041
1915	2,233,369	25,748
1916	492,723	11,523
1917	408,163	10,029
1918	179,200	2,376
1919	1,285	90
1920	41,108	1,267
1921	1,090,364	19,291
1922	3,651,152	55,643
1923	**2,037,133**	**47,352**
1924	1,184,694	29,665
1925	4,137,237	91,149
1926	**2,928,192**	**61,120**
1927	6,031,772	137,883
1928	6,031,191	134,719
1929	7,717,328	181,521

Blanco Polish

	Pounds.	Dollars.
1913	.....	21,854
1914	.....	17,997
1915	.....	17,743
1916	.....	21,299
1917	.....	53,458
1918	.....	24,821
1919	.....	18,953
1920	.....	36,387
1921	.....	17,999
1922	.....	17,785
1923	.....	**15,850**
1924	84,447	11,768
1925	79,263	12,339
1926	**78,521**	**13,475**
1927	10,832	1,821
1928	47,210	7,452
1929	43,319	7,842

Bleacher's Blue

		Dollars.
1913	.....	4,143
1914	.....	14,922
1915	.....	14,125
1916	.....	14,922
1917	.....	19,048
1918	.....	5,166
1919	.....	5,107
1920	.....	2,433
1921	.....	2,491
1922	.....	5,069

Not stated after 1922.

Blessed Thistle

	Pounds.	Dollars.
1924	42,696	1,854
1925	108,769	5,520
1926	**63,158**	**3,062**
1927	189,162	12,198
1928	56,072	2,670
1929	24,393	1,504

Bloodchar

	Pounds.	Dollars.
1913	2,954	333
1914	26,674	1,789
1915	14,167	1,196
1916	15	16
1917	.....	.....
1918	.....	.....
1919	10,732	441
1920	.....	.....
1921	101,787	1,735
1922	69	2

Included in "Bone Char," etc., after 1922.

Blood, Dried

	*Tons.	Dollars.
1871	.....	676
1881	.....	.....
1891	.....	1,594
1901	.....	138
1914	.....	391,947
1915	.....	227,648
1916	.....	196,600
1917	.....	379,067
1918	.....	479,518
1919	14,281,776	518,630
1920	18,457,336	678,948
1921	7,412,909	290,609
1922	15,085,485	337,349
1923	**22,266,402**	**800,993**
1924	9,300	583,122
1925	7,902	414,553
1926	**11,862**	**658,204**
1927	12,721	753,586
1928	9,689	627,972
1929	10,310	740,278

* Quantity stated in pounds prior to 1924.

Blues, Such as Berlin, Prussian, Chinese, Etc.

	Pounds.	Dollars.
1871	19,185	7,133
1881	47,031	8,859
1891	181,451	48,074
1901	154,753	40,234
1914	275,174	50,149
1915	547,299	112,904
1916	185,294	110,901
1917	373,074	209,524
1918	13,867	15,009
1919	8,222	5,879
1920	297,256	120,726
1921	275,757	124,204
1922	20,617	7,113
1923	**18,190**	**7,871**
1924	23,156	5,786
1925	16,182	5,071
1926	8,998	2,892
1927	14,202	4,654
1928	18,581	5,202
1929	47,435	12,846

Bones, Crude, Steamed or Ground

	Pounds.	Dollars.
1871	.....	27,183
1881	.....	312,697
1891	.....	332,911
1901	.....	353,184
1913	.....	565,666
1914	.....	820,730
1915	.....	756,015
1916	.....	755,700
1917	.....	826,142
1918	.....	1,010,871
1919	26,275,886	369,583
1920	94,593,269	1,500,142
1921	155,409,170	2,526,323
1922	41,202,190	450,649
1923	**96,805,736**	**1,149,822**
1924	88,304,848	1,131,563
1925	119,579,636	1,282,848
1926	**106,784,362**	**1,153,785**
1927	112,530,337	1,296,792
1928	127,504,214	1,689,858
1929	94,645,535	1,388,215

Bone Black, Lamp Black, Etc.

	Pounds.	Dollars.
1891	.....	32,926
1901	.....	47,946
1913	.....	31,056
1914	.....	27,604
1915	.....	24,459
1916	.....	2,396
1917	.....	6,388
1918	.....	279
1919	69,977	5,118
1920	315,272	26,663
1921	439,126	28,757
1922	518,809	25,717
1923	1,787,243	119,068

Stated separately after 1923.

Bone Black, Dry or Ground in Oil

	Pounds.	Dollars.
1924	1,563,260	34,641
1925	146,641	10,080

Not stated after 1925.

Bone Black, Bone Char, Blood Char, Decolorizing, Etc., Not Suitable for Use as Pigment

	Pounds.	Dollars.
1901	.....	2,082
1913	.....	12,484
1914	.....	17,717
1915	.....	120,715
1916	.....	86,724
1917	.....	80,163
1918	.....	11,865
1919	.....	69,813
1920	.....	312,330
1921	.....	433,712
1922	.....	80,812
1923	.....	**85,807**
1924	186,291	18,396
1925	1,516,471	50,931
1926	**2,204,646**	**65,791**
1927	1,789,780	87,141
1928	1,656,378	94,264
1929	2,555,325	146,662

Bone Dust, Bone Meal, and Animal Carbon and Ash, Fit Only for Fertilizer

	Tons.	Dollars.
1881	.....	19,666
1891	6,614	122,717
1901	2,185	38,097
1913	33,919	818,307
1914	41,446	1,036,493
1915	22,440	554,748
1916	20,595	527,079
1917	14,805	383,541
1918	8,428	285,882
1919	3,970	92,588
1920	6,867	248,176
1921	27,413	1,417,886
1922	18,234	495,445
1923	**41,994**	**1,215,547**
1924	47,424	1,537,436
1925	16,594	460,092
1926	**40,439**	**1,169,895**
1927	50,071	1,475,250
1928	70,587	2,036,620
1929	70,102	2,221,025

Borate of Lime or Soda, and Other Borate Material, Crude

	Pounds.	Dollars.
1922	3,360,000	67,500
1923	**10,317,008**	**226,584**
1924	10,120,816	149,984
1925	5,284,243	86,367
1926	**6,932,164**	**97,324**

Included in "Borax, Crude," after 1926.

Borax, Crude

	*Tons.	Dollars.
1871	5	1
1881	.....	.....
1891	82,642	9,050
1901	501,137	18,291
1913	11,768	882
1914	686	93
1915	.....	.....
1916	.....	.....
1917	83	3
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	6,854,490	107,788
1923	**1,916,900**	**44,458**
1924	2,240,100	22,724
1925	4,480,000	64,496
1926	**2,240,023**	**32,145**
1927	13,440,000	187,679
1928	6,000	213,635
1929	4,165	136,307

* Quantity stated in "Pounds" prior to 1928.

Borax, Refined

	Pounds.	Dollars.
1871	134,927	20,705
1881	4,136	866
1891	10,725	1,062
1901	.....	.....
1914	4,522	641
1915	2,265	314
1916	682	112
1917	614	109
1918	2	1
1919	478	106
1920	30,334	2,425
1921	226,469	12,505
1922	767	255
1923	**62**	**15**
1924	109,516	7,005
1925	1,323	248
1926	**1,120**	**175**
1927	20,014	1,627
1928	208,659	4,586
1929	5,215	1,018

Imports Into the United States

Bort

	Carats.	Dollars.
1871	.....	17
1881	.....	51,409
1891	.....	142,818
1901	.....	783,926
1913	.....	94,043
1914	.....	86,717
1915	.....	71,548
1916	.....	54,974
1917	.....	156,983
1918	.....	297,939
1919	.....	676,095
1920	.....	3,591,776
1921	.....	1,037,852
1922	.....	1,047,894
1923	.....	313,633
1924	.....	93,813
1925	33,991	230,486
1926	90,772	707,111
1927	3,576	53,857
1928	1,287	26,286
1929	2,686	43,027

Bottle Caps, Collapsible Tubes and Sprinkler Tops, Not Decorated, Etc.

	Gross.	Dollars.
1913	.....	24,123
1914	.....	50,425
1915	.....	28,420
1916	.....	15,106
1917	.....	13,899
1918	.....	9,607
1919	.....	27
1920	.....	741
1921	.....	1,799
1922	.....	6,255
1923	.....	5,916
1924	.....	10,703
1925	.....	9,649
1926	.....	34,995
1927	120,275	41,764
1928	61,579	33,476
1929	75,934	20,584

Bottle Caps, Collapsible Tubes and Sprinkler Tops, Decorated, Etc.

	Gross.	Dollars.
1913	.....	203,357
1914	.....	547,034
1915	.....	214,522
1916	.....	178,081
1917	.....	190,864
1918	.....	55,532
1919	.....	11,118
1920	.....	73,551
1921	.....	46,733
1922	.....	94,154
1923	.....	60,566
1924	.....	70,579
1925	.....	110,064
1926	.....	25,750
1927	248,103	113,097
1928	274,123	175,771
1929	407,310	137,335

Brazil Wood

	Pounds.	Dollars.
1924	1,602,992	10,188
1925	1,301,898	16,123
1926	1,944,940	21,500
1927	31,000	166
1928	256,368	3,513
1929	881,251	10,791

Bristles

1871	581,429	721,518
1881	891,877	955,118
1891	1,522,115	1,502,827
1901	50,449	21,983

Stated separately for later years.

Bristles, Crude, Not Sorted, Bunched or Prepared

	Pounds.	Dollars.
1913	18,913	13,306
1914	27,036	25,280
1915	45,467	3,336
1916	92,300	15,239
1917	128,894	52,431
1918	33,483	44,145
1919	45,754	64,062
1920	100,737	148,938
1921	86,203	275,747
1922	5,816	11,032
1923	60,740	20,676
1924	6,188	17,124
1925	4,877	12,661
1926	67,998	24,789
1927	3,404	6,615
1928	1,973	1,793
1929	5,362	8,659

Pristles, Sorted, Bunched, or Prepared

	Pounds.	Dollars.
1913	3,479,666	3,319,904
1914	3,551,081	3,255,554
1915	3,726,625	3,348,533
1916	3,514,309	3,456,452
1917	4,456,284	4,678,801
1918	3,873,252	4,643,042
1919	3,358,111	4,599,516
1920	4,109,222	8,203,803
1921	4,008,241	8,534,333
1922	3,238,475	4,629,841
1923	5,407,504	7,670,472
1924	5,544,507	9,217,533
1925	3,858,985	7,766,451
1926	4,690,875	7,508,691
1927	5,468,746	7,462,721
1928	3,411,113	4,781,330
1929	5,078,904	6,910,630

Bromine

	Pounds.	Dollars.
1922	300	84
1923	1,462	670
1924	404	840
1925	41,820	9,714
1926	5,829	2,215
1927	35,517	13,625
1928	.....	.....
1929	17,573	5,804

Bromine Compounds N. E. S.

	Pounds.	Dollars.
1924	17,075	3,099
1925	148,508	55,176
1926	76,077	20,168
1927	551,466	170,564
1928	186,872	50,700
1929	2,214	1,535

Bronze, or Dutch Metal, in Leaf

	*Leaves (5½x5½ Inches)	Dollars.
1871	.....	15,492
1881	.....	45,307
1891	.....	183,249
1901	983,371	87,864
1913	763,071	104,329
1914	792,578	110,316
1915	896,038	110,163
1916	291,396	38,559
1917	306,497	81,277
1918	473,835	136,394
1919	158,516	38,114
1920	246,944	71,535
1921	219,857	58,447
1922	158,028	32,586
1923	445,437	86,223
1924	501,614	87,137
1925	42,349,984	60,938
1926	45,879,591	90,894
1927	39,465,594	73,445
1928	40,293,413	66,468
1929	34,961,470	55,885

*Quantity stated in 100 leaves prior to 1925.

Bronze Powder, Brocades, Flitters and Metallics

	Pounds.	Dollars.
1891	130,367	19,555
1901	1,960,025	611,467
1913	1,405,502	420,308
1914	1,403,091	406,249
1915	1,063,206	288,054
1916	161,409	96,852
1917	524,032	283,976
1918	61,785	34,153
1919	11,099	5,093
1920	138,253	82,294
1921	745,041	288,435
1922	1,167,005	293,968
1923	965,056	287,363
1924	80,082	53,904

Stated separately after 1924.

Bronze Brocades, Flitters and Metallics

	Pounds.	Dollars.
1925	78,862	58,487
1926	84,724	48,266
1927	266,156	117,859
1928	350,050	139,674
1929	676,593	229,176

Bronze Powder

	Pounds.	Dollars.
1925	744,372	275,235
1926	936,230	364,539
1927	1,008,408	371,489
1928	971,493	387,996
1929	1,093,757	402,913

Brown, Spanish, Indian Red and Colcothar, or Oxide of Iron

	Pounds.	Dollars.
1871	.....	40,663
1881	.....	30,195
1891	.....	25,790
1901	.....	66,251
1913	.....	103,604
1914	.....	186,476
1915	.....	183,033
1916	.....	221,209
1917	.....	292,122
1918	.....	233,516
1919	9,791,019	280,076
1920	11,277,278	362,288
1921	16,656,187	522,306
1922	17,936,324	589,329
1923	20,273,852	724,244

Not stated after 1923.

Brown, Vandyke, Cassel Earth or Cassel Brown

	Pounds.	Dollars.
1881	.....	6,451
1891	.....	106
1901	.....	.....
1913	.....	1,381
1914	.....	2,663
1915	.....	1,497
1916	.....	365
1917	.....	2,534
1918	.....	854
1919	33,600	2,573
1920	373,456	21,181
1921	417,875	13,314
1922	327,400	7,514
1923	478,281	12,882
1924	418,605	7,877
1925	486,407	9,364
1926	988,962	17,424
1927	1,508,459	22,735
1928	1,113,270	19,864
1929	1,344,812	23,500

Brushes, Feather Dusters and Hair Pencils

		Dollars.
1871	.....	222,188
1881	.....	439,856
1891	.....	858,821
1901	.....	1,134,396
1913	.....	2,074,141
*1914	.....	563,160

*Figures cover period from July 1 to October 3, 1913.

Stated separately after October 3, 1913.

Brushes

		Dollars.
1914	.....	1,605,964
1915	.....	1,667,239
1916	.....	1,309,423
1917	.....	2,188,034
1918	.....	2,979,414

Stated separately after 1918.

Brushes, Artists', Including Hair Pencils

	*Dozen.	Dollars.
1919	401,262	5,349
1920	934,468	9,603
1921	2,072,143	33,349
1922	3,046,264	22,495
1923	2,308,314	24,684
1924	3,582,327	35,671
1925	3,207,644	46,273
1926	6,796,223	61,004
1927	1,327,970	129,856
1928	2,254,591	210,022
1929	3,641,960	288,421

*Quantity stated as "Number" prior to 1927.

Brushes, Paint

	*Dozen.	Dollars.
1924	4,509,511	86,238
1925	3,305,138	65,739
1926	3,785,980	63,385
1927	631,160	270,701
1928	720,568	211,283
1929	236,415	112,180

*Quantity stated as "Number" prior to 1927.

Brushes, Toilet, Comprising Tooth, Hair, Nail or Hand

	Number.	Dollars.
1919	43,835,308	2,208,099
1920	41,980,389	3,004,436
1921	34,442,124	3,102,492
1922	28,379,384	1,774,798
1923	43,822,871	2,306,445
1924	27,582,785	1,325,278
1925	16,534,799	815,395

Subdivided after 1925.

Brushes, N. E. S.

	*Dozen.	Dollars.
1919	7,899,454	205,327
1920	7,064,346	196,768
1921	12,747,257	586,508
1922	9,617,492	368,599
1923	17,916,236	765,302
1924	23,634,835	663,277
1925	18,564,750	623,279
1926	18,953,673	700,867
1927	990,516	563,695
1928	702,598	187,427
1929	478,639	143,185

*Quantity stated as "Number" prior to 1927.

Buchu Leaves

	Pounds.	Dollars.
1871	71,524	7,530
1881	93,850	14,012
1891	.....	1,314
1901	.....	22,238
1913	105,310	114,632
1914	125,368	130,352
1915	120,704	115,689
1916	94,520	85,452
1917	100,809	85,807
1918	50,685	42,434
1919	85,303	89,578
1920	86,535	138,843
1921	93,757	182,722
1922	67,506	44,974
1923	135,298	96,532
1924	128,192	81,019
1925	112,337	47,746
1926	83,180	28,446
1927	130,978	32,444
1928	97,832	23,465
1929	139,294	27,714

Buckthorn

	Pounds.	Dollars.
1924	313,955	13,981
1925	84,859	4,417
1926	303,534	13,391
1927	282,413	9,791
1928	299,494	8,567
1929	196,571	5,250

Burdock

	Pounds.	Dollars.
1924	44,277	4,768
1925	37,449	3,456
1926	50,424	2,912
1927	33,509	2,445
1928	51,705	3,827
1929	64,844	4,993

Butyraldehyde

	Pounds.	Dollars.
1926	10,586	2,632
1927	55,114	11,005
1928	68,037	14,688
1929	27,945	5,519

Cadmium

	Pounds.	Dollars.
1881	.....	1,131
1891	.....	678
1901	.....	5,715
1913	1,000	1,508
1914	1,543	1,239
1915	264	278
1916	5	6
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	101	216
1922	.....	.....
1923	2,256	2,553
1924	1,102	743
1925	5	6
1926	.....	.....
1927	.....	.....
1928	74,748	39,554
1929	342,804	246,292

Caffeine

	Pounds.	Dollars.
1913	59,773	211,361
1914	80,350	280,323
1915	54,323	186,557
1916	1,267	15,228
1917	1,601	17,219
1918	6,471	64,529
1919	2,662	26,383
1920	2,992	14,884
1921	2,574	12,769
1922	8,519	34,655
1923	5,890	11,361
1924	100	234
1925	752	1,680
1926	.....	.....
1927	1,500	2,713
1928	3,654	5,312
1929	7,379	7,774

Caffeine Salts and Derivatives, Except Coaltar

	Pounds.	Dollars.
1914	.....	9,712
1915	.....	4,071
1916	.....	605
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	44
1922	.....	1,195
1923	.....	951
1924	150	209
1925	61	117
1926	300	710
1927	.....	.....
1928	228	227
1929	312	274

Calamus

	Pounds.	Dollars.
1924	17,658	990
1925	14,292	1,209
1926	13,939	608
1927	25,829	1,421
1928	3,411	515
1929	18,005	687

Calcium

	Pounds.	Dollars.
1920	21,648	3,937
1921	2,269	2,692
1922	3,684	682
1923	41	141
1924	4,301	2,122
1925	1,325	724
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	2,691	3,176

Calcium Acetate, Chloride, Carbide and Nitrate

	Pounds.	Dollars.
1871	.....	89,660
1881	.....	.....
1891	.....	.....
1901	.....	.....
1914	.....	53,455
1915	.....	1,208,394
1916	.....	3,206,369
1917	.....	3,808,281
1918	.....	3,422,190
1919	74,915,529	2,920,293
1920	76,847,476	2,911,179
1921	111,261,888	4,466,039
1922	47,667,755	1,775,973
1923	41,360,410	1,481,787

Stated separately after 1923.

Calcium Acetate, Crude (Brown and Gray)

	Pounds.	Dollars.
1924	1,285,427	37,573
1925	4,889,747	120,794
1926	3,217,053	78,854
1927	6,415,268	206,513
1928	7,404,325	256,615
1929	14,467,615	574,968

Calcium Arsenate

	Pounds.	Dollars.
1925	84	30
1926	2,037	385
1927	3,817	721
1928	.....	.....
1929	1,323	233

Calcium Carbide

	Pounds.	Dollars
1924	10,271,143	352,3[illegible]
1925	16,630,147	628,[illegible]72
1926	17,553,503	632,072
1927	16,289,425	645,012
1928	1,519,801	53,066
1929	3,536,920	131,983

Calcium Chloride

	Pounds.	Dollars.
1924	8,018,017	54,219
1925	5,970,844	47,258
1926	9,555,280	68,884
1927	15,088,415	97,510
1928	14,912,647	84,950
1929	17,669,478	106,631

Calcium Cyanamid or Lime Nitrogen

	Tons.	Dollars.
1913	14,656	777,774
1914	29,536	1,590,004
1915	20,564	919,574
1916	38,023	1,633,366
1917	44,146	1,951,104
1918	43,070	2,297,475
1919	46,149	2,705,475
1920	84,678	5,534,716
1921	34,702	2,443,450
1922	21,643	1,111,375
1923	57,678	3,086,271
1924	67,715	3,611,887
1925	90,761	4,252,918
1926	102,052	5,055,086
1927	92,153	3,977,599
1928	125,907	4,597,957
1929	155,980	5,409,892

Calcium Nitrate (Nitrate of Lime)

	Tons.	Dollars.
1924	9,496	379,580
1925	7,535	346,285
1926	11,655	500,286
1927	16,999	774,912
1928	22,373	969,947
1929	30,709	1,260,067

Calcium Tartrate, Crude

	Pounds.	Dollars.
1914	118,256	8,849
1915	1,755,954	161,566
1916	1,101,255	135,638
1917	371,910	51,418
1918	118,355	19,715
1919	.....	.....
1920	212,519	27,235
1921	54,851	809
1922	218,000	12,080
1923	1,081,827	80,065
1924	356,983	1,454
1925	622,106	40,792
1926	541,035	38,236
1927	199,645	15,544
1928	3,735,512	311,717
1929	6,633,278	624,650

Calomel, Corrosive Sublimate and Other Mercurial Medicinal Preparations

		Dollars.
1871	.....	3,147
1881	.....	5,640
1891	.....	5,244
1901	.....	15,931
1913	.....	42,728
1914	.....	37,589
1915	.....	25,694
1916	.....	13,158
1917	.....	9,974
1918	.....	2,124
1919	.....	915

Stated separately after 1919.

Calomel

	Pounds.	Dollars.
1920	3,026	3,254
1921	720	1,029
1922	2,581	1,876
1923	2,847	3,259
1924	3,386	3,018
1925	4,796	4,093
1926	7,659	7,727
1927	5,526	6,458
1928	6,365	8,963
1929	2,623	4,137

Capsicum, or Red Pepper, Ground or Unground

	Pounds.	Dollars.
1913	4,022,753	412,823
*1914	984,716	130,076

*Figures are for July 1 to October 3, 1913. Stated separately after October 3, 1913. See under Pepper.

Camomile Flowers

	Pounds.	Dollars
1881	.....	11,761
1891	.....	9,463
1901	.....	34,035
1913	.....	14,176
1914	.....	6,252
1915	.....	13,113
1916	.....	27,810
1917	.....	64,432
1918	.....	41,886
1919	72,404	14,394
1920	336,397	91,515
1921	167,700	36,893
1922	38,124	7,653
1923	383,828	67,240
1924	242,872	24,104
1925	56,582	5,458
1926	124,125	11,566
1927	199,261	29,891
1928	211,679	27,004
1929	296,443	41,952

Imports Into the United States

Camwood

	Tons.	Dollars.
1881	308	27,513
1891	3	220
1901	.....	.....
1913	½	191
1914	.....	.....
1915	1	209
1916	80	5,991
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	1	131
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Candle Pitch or Tar, and Palm or Other Vegetable Stearin

	Pounds.	Dollars
1891	.....	13,411
1901	.....	4,337
1913	3,047,020	56,970
1914	2,203,222	40,004
1915	1,262,725	23,400
1916	853,140	21,596
1917	467,958	14,446
1918	103,349	7,063
1919	.....	.....
1920	160,050	40,795
1921	5,000	767
1922	40,826	2,025
1923	250,290	5,670

Included in "Oil, Stearin, Palm, etc.," after 1923.

Candles and Tapers, Wax and Other

	Pounds.	Dollars.
1871	16,018	5,894
1881	10,999	3,237
1891	19,842	3,968
1901	26,272	5,651
1913	.....	22,990
1914	.....	14,348
1915	.....	8,638
1916	.....	9,118
1917	.....	4,515
1918	.....	3,916
1919	28,348	6,708
1920	28,459	8,365
1921	34,991	9,369
1922	76,715	13,726
1923	74,096	14,816
1924	262,129	66,963
1925	552,682	169,593

Subdivided after 1925.

Candles, Wax

	Pounds.	Dollars.
1926	413,961	149,446
1927	436,126	191,313
1928	1,112,993	235,943
1929	1,266,822	307,069

Candles, All Other

	Pounds.	Dollars.
1926	24,375	8,073
1927	34,839	9,142
1928	39,168	8,684
1929	26,313	6,529

Cannabis

	Pounds.	Dollars.
1924	200	443
1925	202	1,292
1926	299	1,664
1927	200	1,020
1928	372	2,705
1929	216	1,706

Cantharis and Other Blistering Beetles

	Pounds.	Dollars.
1871	20,803	20,539
1881	16,008	11,087
1891	5,787	4,256
1901	22,800	9,435
1914	5,648	4,435
1915	14,047	12,266
1916	32,603	26,923
1917	25,625	47,857
1918	5,949	6,677
1919	5,289	10,270
1920	10,159	12,269
1921	4,573	5,196
1922	2,953	3,026
1923	17,400	11,678
1924	667	1,056
1925	3,680	2,500
1926	422	885
1927	.....	.....
1928	2,459	625
1929	3,413	932

Carbazole, Purity of 65% or More

	Pounds.	Dollars.
1920	259	108
1921	.....	.....
1922	8,820	3,865
1923	.....	.....
1924	.....	.....
1925	2,073	828
1926	2,157	324
1927	.....	.....
1928	.....	.....
1929	.....	.....

Carbon Tetrachloride

	Pounds.	Dollars.
1914	572,910	28,300
1915	342,854	18,139
1916	.....	.....
1917	2	2
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	144,472	3,956
1923	22,039	603
1924	1,429	130
1925	.....	.....
1926	107	43
1927	.....	.....
1928	.....	.....
1929	.....	.....

Cassava

	Pounds.	Dollars.
1925	169,807	3,089
1926	65,979	1,885
1927	48,759	1,919
1928	11,958,874	111,648
1929	21,951,205	211,046

Casein or Lactarene

	Pounds.	Dollars.
1913	8,803,039	651,062
1914	10,799,351	705,305
1915	7,919,742	498,897
1916	10,376,641	984,809
1917	12,319,111	1,843,492
1918	12,106,855	1,765,653
1919	8,125,135	959,995
1920	24,039,313	2,783,548
1921	14,179,764	1,570,069
1922	10,529,295	706,861
1923	25,641,741	4,556,246
1924	16,404,299	1,840,057
1925	18,897,139	1,442,204
1926	24,258,397	2,384,058
1927	26,530,425	3,274,394
1928	24,177,199	3,283,870
1929	31,262,915	3,783,512

Casein Compounds, Galalith, Etc.

	Pounds.	Dollars.
1913	.....	12,736
1914	.....	15,060
1915	.....	10,048
1916	.....	10,028
1917	.....	30,762
1918	.....	45,368
1919	.....	75,853
1920	.....	138,515
1921	.....	58,016
1922	.....	147,448
1923	.....	261,960
1924	333,465	360,589
1925	204,347	231,084
1926	137,817	189,460
1927	119,183	224,824

Stated separately after 1927.

Casein Compounds, Galalith, Etc., Crude

	Pounds.	Dollars.
1928	3,268	3,552
1929	7,797	5,448

Casein Compounds, Galalith, Etc., Manufactured

	Pounds.	Dollars.
1928	72,715	177,823
1929	110,692	193,003

Casein Glue, Isinglass and Other Fish Sounds, Prepared

	Pounds.	Dollars.
1924	18,743	23,187
1925	37,268	30,463
1926	20,680	27,394
1927	37,899	33,084
1928	47,532	39,648
1929	55,270	32,412

Cassia Buds, Unground.

	Pounds.	Dollars.
1871	22,003	6,554
1881	64,199	9,897
1891	129,317	13,914
1901	6,545	1,366
1914	173,449	10,101
1915	193,332	10,394
1916	197,056	16,585
1917	218,563	14,131
1918	173,202	16,271
1919	284,140	52,853
1920	211,688	23,399
1921	152,185	17,429
1922	793,701	45,098
1925	549,649	33,072
1926	839,745	60,167
1927	308,191	27,866
1928	228,182	15,343
1929	199,910	14,294

Not stated during 1923 and 1924.

Cassia, Cassia Buds and Cassia Vera, Ground

	Pounds.	Dollars.
1871	2,460	387
1881	.....	.....
1891	.....	.....
1901	.....	.....
1917	139,224	21,672
1918	5,400	844
1919	200	20
1920	.....	.....
1921	24,800	7,753
1922	.....	.....
1923	24,912	1,125
1924	9	3
1925	10	3
1926	22,677	2,294
1927	11,199	1,456
1928	106,009	5,634
1929	6,922	360

Cassia, and Cassia Vera, Unground

	Pounds.	Dollars.
1871	1,632,646	291,972
1881	1,987,052	207,106
1891	3,611,621	137,591
1901	3,364,336	297,478
1914	5,216,426	358,218
1915	5,658,154	348,598
1916	7,487,156	493,161
1917	9,019,350	803,079
1918	5,817,554	429,341
1919	6,581,061	546,194
1920	8,102,110	858,667
1921	5,850,438	622,260
1922	9,981,916	587,018
1923	9,671,137	716,539
1924	3,549 805	211,277
1925	5,929,669	382,994
1926	10,057,868	686,961
1927	7,786,664	602,779
1928	7,116,452	559,955
1929	7,471,366	520,924

Castoreum

	Ounces.	Dollars.
1871	.....	5
1881	.....	62
1891	5,247	1,343
1901	527	232
1914	6,338	3,408
1915	13,035	5,344
1916	19,657	6,614
1917	24,427	8,250
1918	28,578	7,961
1919	21,067	6,941
1920	31,534	10,378
1921	8,288	2,385
1922	22,985	4,657
1923	3,807	545
1924	8,634	1,544
1925	1,958	527
1926	1,724	1,128
1927	4,716	1,880
1928	1,587	1,703
1929	2,382	2,055

Castor Beans

	*Pounds.	Dollars.
1871	36,853	44,393
1881	36,540	34,770
1891	105,374	120,202
1901	191,288	255,594
1914	1,043,928	1,154,085
1915	924,605	993,580
1916	1,071,969	1,555,495
1917	767,075	1,185,775
1918	1,262,488	2,842,206
1919	627,835	2,188,256
1920	1,404,550	3,633,693
1921	663,031	1,343,521
1922	1,554,016	2,046,377
1923	1,504,941	2,876,226
1924	81,543,416	3,221,267
1925	90,747,113	4,320,744
1926	106,763,274	4,169,573
1927	119,111,564	4,104,269
1928	113,728,658	3,915,565
1929	171,042,989	6,020,050

* Figures stated in bushels prior to 1924.

Catgut, Whipgut or Wormgut, Unmanufactured

	Pounds.	Dollars.
1891	.....	246,450
1901	.....	1,834
1914	.....	123,551
1915	.....	198,081
1916	.....	253,678
1917	.....	316,491
1918	.....	216,810
1919	24,813	328,796
1920	23,197	172,662
1921	47,440	324,058
1922	46,988	274,199
1923	56,856	297,720

Stated separately after 1923.

Catgut For Surgical Use

	Pounds.	Dollars.
1924	35,400	155,444
1925	21,180	84,894
1926	7,109	31,478
1927	831	6,677
1928	604	5,306
1929	129	1,113

Catgut, Whipgut and Wormgut, Manufactures of

	Pounds.	Dollars.
1881	.....	194,132
1891	.....	13,451
1901	.....	77,532
1914	.....	62,466
1915	.....	68,492
1916	.....	9,790
1917	.....	4,867
1918	.....	8,602
1919	.....	14,446
1920	.....	8,001
1921	.....	21,170
1921	.....	6,850
1923	.....	42,394
1924	6,302	64,412
1925	3,971	33,147
1926	28,091	129,891
1927	32,488	152,517
1928	41,593	163,225
1929	21,980	96,905

Cellophane in Sheets

	Pounds.	Dollars.
1918	.....	5,046
1919	.....	10,761
1920	.....	6,585
1921	.....	31,847
1922	.....	12,957
1923	.....	145,711
1924	6,276	5,607
1925	51,477	55,902
1926	98,465	117,794
1927	119,164	105,713
1928	73,051	61,433
1929	48,259	42,103

Cement, Keene's, or Other Gypsum Cement

	Tons.	Dollars.
1914	1,225	19,290
1915	586	11,310
1916	520	8,766
1917	468	8,530
1918	305	6,362
1919	89	3,024
1920	197	5,976
1921	216	8,736
1922	186	5,788
1923	380	10,763
1924	353	10,370
1925	507	12,281
1926	517	15,459
1927	526	15,139
1928	551	11,991
1929	467	13,236

Cement, Portland, White, Non-staining

	*Pounds.	Dollars.
1920	639	24,652
1921	1	31
1922	.....	.....
1923	17,943	207,812
1924	7,175,611	40,297
1925	6,060,125	29,311
1926	5,001,282	25,898
1927	6,376,242	54,100
1928	5,333,393	38,398
1929	8,373,047	51,092

* Quantity stated in tons prior to 1924.

Cement, Roman, Portland and Other Hydraulic

	*Barrels of 376 pounds.	Dollars.
1871	.....	52,103
1881	.....	441,512
1891	10,905,989	3,970,565
1901	6,282,158	2,164,556
1913	313,092	124,395
1914	374,471	163,460
1915	342,292	132,864
1916	19,960	9,182
1917	4,196	2,929
1918	8,426	6,020
1919	32,135	51,063
1920	815,812	441,522
1921	1,317,177	965,591
1922	480,809	330,671
1923	2,437,715	1,243,561
1924	1,893,385	3,690,754
1925	1,876,188	3,532,937
1926	3,708,965	6,877,088
1927	2,066,905	3,587,412
1928	2,388,394	3,277,295
1929	1,830,927	2,302,465

* Quantity stated in 100 pounds prior to 1924.

Cement, Not Elsewhere Specified

	Pounds.	Dollars.
1926	1,052,832	21,259
1927	980,512	16,916
1928	569,117	22,218
1929	142,350	17,286

Cerium Fluoride

	Pounds.	Dollars.
1924	11,600	921
1925	36,650	1,173
1926	.....	.....
1927	39,683	2,469
1928	100	26
1929	.....	.....

Cerium Nitrate

	Pounds.	Dollars.
1924	969	811
1925	4,636	4,892
1926	2,786	8,194
1927	42	71
1928	15	19
1929	114	131

Cerium Salts, N. E. S.

	Pounds.	Dollars.
1924	3,951	1,087
1925	82,335	3,693
1926	16,970	1,493
1927	22,150	1,710
1928	67,006	5,131
1929	149,667	11,667

Chalk Unmanufactured

	Tons.	Dollars.
1871	18,248	42,750
1881	51,546	52,784
1891	73,772	51,845
1901	.....	.....
1913	150,010	120,049
1914	128,947	102,907
1915	120,225	91,188
1916	131,368	95,861
1917	143,216	131,385
1918	107,391	120,792
1919	84,539	117,796
1920	112,292	179,543
1921	123,672	233,408
1922	78,084	123,123
1923	140,520	189,626
1924	104,850	144,044
1925	102,202	122,779
1926	104,647	126,124
1927	104,161	135,896
1928	102,089	125,382
1929	102,493	118,863

Chalk, When Ground, Precipitated, or Otherwise Prepared, Including Tailor's, Billiard, Red or French

		Dollars.
1871	.....	4,662
1881	.....	3,851
1891	.....	18,643
1901	.....	.....
1913	.....	79,731
1914	.....	52,656
1915	.....	36,621
1916	.....	46,135
1917	.....	39,319
1918	.....	42,390
1919	.....	28,265

Stated as following classes after 1919:—

Chalk, Precipitated

	Pounds.	Dollars.
1881	.....	.....
1891	.....	4,262
1901	.....	.....
1920	932,578	23,863
1921	2,390,250	58,184
1922	2,801,299	70,090
1923	6,838,100	123,659
1924	13,160,284	119,015
1925	15,245,818	136,835
1926	19,991,865	145,429
1927	14,605,354	118,456
1928	3,246,818	97,033
1929	3,671,705	92,905

Chalk, Precipitated, for Medicinal or Toilet Purposes

	Pounds.	Dollars
1881	.....	.....
1891	433,736	18,643
1901	.....	.....
1920	1,021,885	27,899
1921	328,073	9,952
1922	95,170	1,779

Not stated after 1922.

Chamois Skins

	Dozen.	Dollars.
1913	.....	149,057
1914	.....	107,324
1915	.....	64,267
1916	.....	108,346
1917	.....	176,578
1918	.....	86,923
1919	.....	7,950
1920	.....	61,689
1921	.....	74,454
1922	.....	82,150
1923	.....	138,858
1924	.....	245,933
1925	.....	227,564
1926	.....	270,324
1927	61,325	473,126
1928	43,676	392,760
1929	51,314	467,028

Charcoal, Wood

	Pounds.	Dollars.
1913	.....	25,557
1914	.....	60,266
1915	.....	39,978
1916	.....	45,174
1917	.....	73,583
1918	.....	10,915
1919	1,355,812	42,548
1920	4,722,508	83,329
1921	6,107,968	90,411
1922	1,244,176	14,030
1923	1,705,705	15,454
1924	6,926,320	48,928
1925	6,905,487	48,687
1926	9,604,464	54,268
1927	9,136,629	50,769
1928	7,548,863	58,205
1929	3,794,980	24,992

Chestnut Extract for Tanning

	Pounds.	Dollars.
1922	2,420	116
1923	.....	.....
1924	1,400	131
1925	2,926	87
1926	200	18
1927	.....	.....
1928	.....	.....
1929	57,500	1,997

Chicory Root, Raw but Unground

	Pounds.	Dollars.
1913	2,203,057	32,939
1914	1,580,925	22,028
1915	471,966	6,717
1916	.....	.....
1917	241,299	29,131
1918	4,577	501
1919	.....	.....
1920	1,526,306	82,989
1921	6,052,078	391,923
1922	292	70
1923	468,733	10,390

Included in "Acorns, Chicory and Dandelion Root" after 1923.

China Clay, or Kaolin, Crude

	Tons.	Dollars.
1881	6,887	66,654
1891	33,706	232,699
1901	105,198	701,790
1913	263,838	1,753,822
1914	241,936	1,590,054
1915	230,484	1,506,555
1916	228,936	1,376,990
1917	206,729	1,212,099
1918	192,705	1,303,668
1919	146,260	1,436,786
1920	213,713	2,481,396
1921	247,267	2,805,865
1922	192,661	2,037,912
1923	255,132	2,762,642
1924	255,502	2,650,330
1925	321,667	3,160,686
1926	308,178	3,039,567
1927	326,737	3,169,344
1928	259,694	2,519,558
1929	189,332	2,007,995

China Clay, or Kaolin, Washed

	Tons.	Dollars.
1929	88,574	1,035,267

Imports Into the United States

Chloral Hydrate

	Pounds.	Dollars.
1901	4,485	2,993
1913	.....	.....
1914	644	241
1915	112	25
1916	1	2
1917	.....	.....
1918	1,057	1,509
1919	.....	.....
1920	.....	.....
1921	1,850	1,711
1922	55	57
1923	7,489	3,005
1924	.....	.....
1925	3,096	3,150
1926	2	2
1927	.....	.....
1928	888	337
1929	562	292

Chloroform

	Pounds.	Dollars.
1871	62	107
1881	50	33
1891	.....	.....
1901	259	79
1913	942	1,643
1914	2,444	990
1915	26	43
1916	.....	.....
1917	.....	.....
1918	1	1
1919	54	40
1920	2	4
1921	.....	.....
1922	4,512	615
1923	396	136
1924	.....	.....
1925	88	101
1926	18	19
1927	11	30
1928	10	34
1929	65	73

Chlorophyll Extract

	Pounds.	Dollars.
1912	4,461	3,586
1913	7,508	8,544
1914	10,125	8,503
1915	3,490	3,671
1916	190	192
1917	.....	.....
1918	199	163
1919	363	511
1920	8	14
1921	1,248	2,242
1922	2,751	3,517
1923	1,881	1,716
1924	3,870	5,393
1925	2,259	4,322
1926	2,569	6,900
1927	12,620	11,980
1928	6,834	9,991
1929	11,818	13,194

Chrome or Chromium Metal

	*Pounds.	Dollars.
1913	522	89,291
1914	208	25,976
1915	81	6,943
1916	10	1,998
1917	10	1,851
1918	.....	.....
1919	.....	.....
1920	2,553,255	279,894
1921	2,945,624	315,504
1922	985,243	115,723
1923	3,082,761	271,770
1924	157,351	28,823
1925	9,475	4,005
1926	2,240	1,529
1927	.....	.....
1928	45,194	5,387
1929	47,669	5,242

* Quantity stated in tons prior to 1920.

Chrome Ore or Chromite

	Tons.	Dollars.
1891	4,693	56,982
1901	12,390	214,762
1913	49,772	503,664
1914	85,892	777,166
1915	159,421	772,220
1916	107,069	1,196,250
1917	113,385	1,648,728
1918	77,863	1,555,861
1919	71,592	2,439,830
1920	103,625	1,418,870
1921	152,784	1,689,202
1922	54,820	413,208
1923	134,757	1,186,125
1924	113,785	980,182
1925	132,701	1,207,517
1926	160,742	1,302,075
1927	257,604	1,996,319
1928	191,727	1,572,332
1929	242,384	1,941,140

Chrome Yellow, Green and Other Chromium Colors

	Pounds.	Dollars.
1891	76,601	11,194
1901	133,029	19,994
1913	148,299	23,405
1914	134,460	22,412
1915	124,638	21,171
1916	27,929	5,586
1917	28,078	4,202
1918	1,310	459
1919	5,127	2,074
1920	34,799	19,164
1921	322,050	23,894
1922	14,835	3,954
1923	83,837	15,820
1924	67,693	15,338
1925	102,408	24,936
1926	177,696	42,157
1927	235,094	49,853
1928	159,919	36,764
1929	191,225	40,529

Chromium Chloride

	Pounds.	Dollars.
1924	6,571	968
1925	.....	.....
1926	25,325	1,651
1927	.....	.....
1928	.....	.....
1929	3,748	485

Chromium Sulphate

	Pounds.	Dollars.
1924	2,524	372
1925	.....	.....
1926	220	158
1927	40,960	3,112
1928	.....	.....
1929	110	33

Chrysarobin and Its Salts

	Pounds.	Dollars.
1924	224	540
1925	312	1,014

Not stated after 1925.

Cinchona Bark, Alkaloids or Salts of, Not Elsewhere Stated

	Ounces.	Dollars.
1891	112,013	29,977
1901	817,315	289,630
1913	648,865	131,692
1914	452,292	117,915
1915	203,330	66,004
1916	231,100	82,167
1917	623,947	324,438
1918	3,131,958	769,403
1919	1,147,102	272,631
1920	1,112,593	295,509
1921	1,666,688	504,489
1922	766,582	276,833
1923	3,405,084	1,106,520
1924	125,141	57,347
1925	361,153	177,866
1926	386,906	98,914
1927	381,356	105,490
1928	213,938	30,465
1929	134,000	52,829

Cinchonidia

	Ounces.	Dollars.
1891	156,229	3,856
1901	28,000	9,465
1913	309,395	43,680
1914	205,006	19,502
1915	69,487	8,223
1916	131,481	15,814
1917	221,272	17,590
1918	86,482	20,708
1919	86,000	25,295
1920	40,188	11,065
1921	89,844	35,558
1922	92,688	55,486

Not stated after 1922.

Cinchonidine and Its Salts

	Ounces.	Dollars.
1924	355,902	140,963
1925	310,640	118,596
1926	437,512	164,047
1927	381,400	128,830
1928	214,973	67,155
1929	265,600	73,280

Cinchonine and Its Salts

	Ounces.	Dollars.
1924	96,940	42,358
1925	52,500	18,881
1926	60,596	16,469
1927	93,400	26,644
1928	101,000	26,242
1929	152,700	37,053

Cinnamon, and Chips of, Unground

	Pounds.	Dollars.
1871	21,932	12,147
1881	10,397	3,853
1891	38,671	4,537
1901	483,992	77,685
1913	1,405,832	188,267
1914	303,967	44,304
1915	528,254	74,081
1916	410,594	50,026
1917	564,248	77,272
1918	686,466	111,004
1919	537,119	99,881
1920	607,183	143,254
1921	524,111	138,660
1922	415,863	66,867
1923	455,737	72,170
1924	430,858	65,815
1925	317,985	76,345
1926	285,256	87,166
1927	297,715	111,278
1928	245,146	113,776
1929	285,386	120,683

Civet

	Ounces.	Dollars.
1891	3,952	6,294
1901	4,397	9,473
1913	11,269	15,557
1914	2,761	3,978
1915	1,820	2,086
1916	9,600	12,099
1917	9,230	13,148
1918	9,766	11,877
1919	15,315	17,253
1920	10,554	12,048
1921	8,662	16,877
1922	13,545	18,684
1923	17,599	31,313
1924	13,694	28,545
1925	15,000	34,646
1926	9,814	20,647
1927	11,211	22,553
1928	11,739	24,708
1929	8,067	18,768

Clay, Common Blue and Gross Almerode Glass-Pot Clay, Unwrought

	Tons.	Dollars.
1891	2,965	38,621
1901	5,423	67,763
1913	23,213	211,005
1914	20,587	180,524
1915	12,274	107,146
1916	3,488	16,088
1917	412	2,353
1918	64	869
1919	80	493
1920	2,456	62,507
1921	4,564	98,029
1922	708	15,376
1923	9,182	161,230
1924	10,600	101,653
1925	6,661	66,632
1926	6,543	68,603
1927	5,479	52,774
1928	5,349	53,616
1929	16,651	175,211

Clay, Plasticine and Other Modeling

	Pounds.	Dollars.
1913	.....	8,519
1914	.....	9,424
1915	.....	6,541
1916	.....	7,978
1917	.....	12,468
1918	.....	7,083
1919	37,875	6,025
1920	84,092	12,162
1921	139,475	22,150
1922	99,569	13,958
1923	52,835	8,313
1924	13,500	1,961
1925	49,003	6,372
1926	30,770	4,283
1927	55,310	9,071
1928	27,000	4,439
1929	39,790	6,321

Clays, or Earths, Crude, Not Specially Provided For

	Tons.	Dollars.
1871	12,160	103,144
1881	12,444	123,545
1891	19,582	154,518
1901	25,146	144,050
1913	37,370	167,614
1914	37,572	210,574
1915	36,072	153,041
1916	34,677	148,916
1917	30,942	138,171
1918	24,474	144,686
1919	23,199	199,332
1920	23,324	200,868
1921	41,259	396,303
1922	30,024	273,257
1923	48,967	398,541
1924	59,511	557,239
1925	65,915	654,365
1926	67,969	614,255
1927	51,699	533,780
1928	42,183	411,384
1929	46,088	426,827

Clover Flowers

	Pounds.	Dollars.
1924	75,512	38,542
1925	.....	.....
1926	19,176	2,142
1927	24,948	1,828
1928	41,448	2,434
1929	33,470	2,197

Cloves, Unground

	Pounds.	Dollars.
1871	1,137,896	64,547
1881	1,046,911	310,543
1891	2,510,066	284,181
1901	2,120,386	170,068
1913	2,734,992	481,751
1914	5,054,621	597,310
1915	5,346,665	595,546
1916	7,066,237	791,708
1917	3,867,851	532,345
1918	5,521,919	1,166,879
1920	6,730,252	2,101,971
1919	3,841,197	1,072,137
1921	4,124,625	1,146,930
1922	6,013,990	1,267,248
1923	6,952,152	1,174,679
1924	5,618,913	1,351,016
1925	5,564,074	1,167,988
1926	5,751,901	1,209,354
1927	6,468,390	1,152,794
1928	5,198,571	823,356
1929	3,574,401	803,435

Clove Stems, Ground

	Pounds.	Dollars.
1928	19,000	6,950
1929	.....	.....

Clove Stems, Unground

	Pounds.	Dollars.
1871	52,446	1,452
1881	118,968	8,435
1891	425,137	8,660
1901	295,696	8,271
1913	32,830	1,333
1914	268	20
1915	4,391	760
1916	57,160	4,009
1917	1,120	174
1918	46,432	6,990
1919	.....	.....
1920	2,905,811	356,363
1921	914,115	61,796
1922	169,515	9,000
1923	49,936	9,999
1924	27,303	4,823
1925	.....	.....
1926	5,844	1,423
1927	1,000	361
1928	5,990	1,249
1929	90,500	32,891

Cobalt Linoleate

	Pounds.	Dollars.
1925	807	294
1926	4,989	1,854
1927	24	22
1928	.....	.....
1929	.....	.....

Cobalt Metal

	Pounds	Dollars.
1919	156,372	511,683
1920	99,595	228,891
1921	133,857	322,293
1922	4,252	11,143
1923	264,933	555,295
1924	156,147	366,588
1925	133,257	286,123
1926	250,257	536,274
1927	477,617	1,072,879
1928	356,797	756,838
1929	690,398	1,411,354

Cobalt and Cobalt Ore, and Zaffer

	Pounds.	Dollars
1881	.....	.....
1891	2,024	54
1901	.....	.....
1913	310,951	30,713
1914	197,009	115,038
1915	24,095	8,225
1916	144,170	136,124
1917	136,883	191,966
1918	161,695	306,310

Stated separately after 1918.

Cobalt Ore

	Pounds.	Dollars.
1919	220,125	55,197
1920	17,035	2,823
1921	13,039	4,794
1922	7,657	3,295
1923	48,447	55,918
1924	35,701	40,042
1925	36,685	21,145
1926	30,672	74,349
1927	194,969	9,738
1928	75,777	12,558
1929	235,771	40,446

Cobalt Oxide

	Pounds.	Dollars.
1871	.....	2,766
1881	21,844	15,837
1891	34,700	63,433
1901	61,962	111,740
1913	29,729	14,405
1914	109,584	95,026
1915	109,155	180,087
1916	238,934	228,745
1917	236,822	220,263
1918	220,793	248,172
1919	143,008	215,441
1920	199,097	282,457
1921	187,177	442,501
1922	160,617	316,393
1923	288,249	579,081
1924	232,020	446,217
1925	244,048	470,782
1926	322,762	614,669
1927	345,326	658,435
1928	335,552	641,032
1929	513,438	823,293

Cobalt Sulphate

	Pounds.	Dollars.
1924	28,659	17,351
1925	.....	.....
1926	28,880	17,228
1927	34,071	17,639
1928	68,180	38,749
1929	71,354	41,157

Cobalt, Salts and Compounds, N. E. S.

	Pounds.	Dollars.
1924	706	697
1925	160	261
1926	412	969
1927	186	289
1928	153	178
1929	1,372	1,077

Coca Leaves

	Pounds.	Dollars.
1901	.....	483
1913	1,175,780	139,035
1914	711,564	91,384
1915	1,048,312	98,870
1916	947,537	100,627
1917	634,932	90,131
1918	1,059,484	179,312
1919	1,023,322	186,477
1920	903,552	211,514
1921	306,308	63,767
1922	33,058	5,170
1923	302,352	91,960
1924	221,519	44,574
1925	99,196	16,222
1926	261,114	72,933
1927	263,691	68,786
1928	235,288	35,669
1929	239,270	46,016

Cocaine, Ecgonine, and Salts of Cocaine

	Pounds.	Dollars.
1901	.....	176,948
1913	3,715	4,835
1914	3,291	4,101
1915	179	422
1916	4,275	5,887
1917	19,388	38,627
1918	8,597	35,358
1919	19,382	68,584
1920	11,614	29,217
1921	6,172	22,521
1922	7,376	16,064

No imports allowed after 1922.

Cocoa Butter

	Pounds.	Dollars.
1913	3,634,986	990,568
1914	2,876,967	801,259
1915	126,028	35,863
1916	69,888	15,824
1917	24,289	7,581
1918	14,512	4,569
1919	30,716	3,310
1920	9,439	4,486
1921	441,633	96,172
1922	6,335,006	1,550,062
1923	2,338,242	590,909
1924	1,022,320	179,049
1925	728,483	123,420
1926	17,997	6,680
1927	247,887	71,135
1928	23,821	9,290
1929	17,367	5,316

Colchicum Seeds and Root

	Pounds.	Dollars.
1924	17,237	672
1925	13,589	1,218
1926	3,493	404
1927	12,199	1,295
1928	20,493	3,765
1929	4,520	1,375

Collodion and Other Liquid Solutions of Pyroxylin

	Pounds.	Dollars.
1922	12,051	4,685
1923	73,107	50,976
1924	122,279	108,278
1925	103,952	92,024
1926	92,136	73,798
1927	288,451	254,111
1928	340,997	247,983
1929	219,078	190,261

Cocculus Indicus, Crude

	Pounds.	Dollars.
1881	1,081	22
1891	1,741	42
1901	9,192	166
1913	.....	.....
1914	4,446	121
1915	9,550	388
1916	.....	.....
1917	7,410	2,818
1918	.....	.....
1919	26,116	10,122
1920	4,325	612
1921	23,632	1,560
1922	.....	.....
1923	460	92
1924	44,920	1,557
1925	7,822	341
1926	5,636	350
1927	.....	.....
1928	.....	.....
1929	2,302	92

Cochineal

	Pounds.	Dollars.
1871	1,869,084	1,184,245
1881	1,072,144	527,836
1891	86,797	19,935
1901	114,414	20,414
1913	109,089	44,249
1914	138,139	52,260
1915	155,430	38,454
1916	772,416	358,914
1917	124,745	46,802
1918	160,547	75,924
1919	177,585	70,229
1920	166,014	72,718
1921	100,844	39,657
1922	191,102	67,011
1923	228,702	87,047
1924	118,856	38,438
1925	115,084	36,721
1926	206,061	67,807
1927	117,843	55,616
1928	91,686	46,710
1929	161,109	84,393

Colocynth

	Pounds.	Dollars.
1924	28,307	4,388
1925	54,391	8,494
1926	10,474	1,339
1927	40,908	9,917
1928	51,695	17,180
1929	159,549	39,301

Imports Into the United States

Colombo Root

	Pounds.	Dollars.
1881	8,336	814
1891	.....	.....
1901	43,040	1,466
1913	27,565	794
1914	4,587	134
1915	8,751	458
1916	48,867	3,442
1917	92,349	4,960
1918	20,759	5,961
1919	2,195	548
1920	130,862	16,185
1921	425,190	32,646
1922	.....	.....
1923	2,440	22
1924	53,983	688
1925	.....	.....
1926	84,018	931
1927	26,801	979
1928	63,672	2,237
1929	12,106	1,095

Colors Ground in Japan

	Pounds.	Dollars.
1924	2,131	318
1925	250	83
1926	849	254
1927	.....	.....
1928	.....	.....
1929	.....	.....

Colors Ground in Water, and Fresco Colors

	Pounds.	Dollars.
1924	116	104
1925	441	287
1926	215	25.
1927	1,393	510
1928	247	94
1929	234	90

Copperas (Ferrous Sulphate, Sulphate of Iron)

	Pounds.	Dollars.
1871	1,842,308	9,083
1881	151,496	956
1891	896,937	4,104
1901	24,786	243
1913	6,196	174
1914	1,120	18
1915	4,750	93
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	377,613	4,869
1921	119,947	1,733
1922	240,517	2,022
1923	758,046	7,870
1924	1,505,794	11,500
1925	839,492	6,039
1926	237,514	4,163
1927	595,807	9,449
1928	936,943	12,665
1929	652,183	10,493

Copper Oxide and Suboxide

	Pounds.	Dollars.
1924	46,389	7,047
1925	91,245	15,537
1926	192,555	34,419
1927	326,447	54,428
1928	254,015	45,656
1929	319,234	55,978

Copper Sulphate or Blue Vitriol

	Pounds.	Dollars.
1871	45,809	2,339
1881	20	3
1891	8,432	310
1901	1,788	95
1913	11,051	728
1914	114,730	5,486
1915	45,239	2,156
1916	184,182	17,651
1917	15,952	2,233
1918	98,143	9,035
1919	120	36
1920	72,605	7,248
1921	676,628	38,370
1922	529,557	23,412
1923	10,083,949	518,381
1924	3,517,880	163,965
1925	1,484,146	66,404
1926	2,870,013	140,676
1927	981,623	44,264
1928	2,240,608	107,822
1929	3,653,975	177,846

Copra

	Pounds.	Dollars.
1913	34,283,592	1,531,864
1914	44,459,158	2,395,105
1915	88,690,392	3,390,157
1916	108,507,765	4,551,422
1917	247,043,127	12,530,112
1918	486,833,808	26,937,621
1919	300,965,246	19,847,782
1920	218,521,946	15,171,465
1921	192,245,515	9,923,789
1922	255,721,818	9,403,636
1923	306,089,995	12,804,008
1924	299,783,531	12,804,108
1925	328,651,513	15,482,353
1926	392,759,250	20,126,308
1927	454,545,641	21,662,071
1928	456,158,309	21,371,802
1929	629,937,221	27,986,822

Cork, Artificial and Composition or Compressed Cork

	Pounds.	Dollars.
1919	175,331	116,505
1920	.....	.....
1921	6	1
1922	220	41
1923	209	191
1924	594	320
1925	1,143	220
1926	7,151	1,322
1927	1,249	294
1928	4,015	1,057
1929	538	137

Cork Bark, Cut Into Squares, Cubes or Quarters

	Pounds.	Dollars.
1919	5,653	2,927
1920	1,353	462
1921	524	145
1922	1,174	106
1923	799	218
1924	793	253
1925	6,813	720
1926	5,339	739
1927	2,709	919
1928	8,229	2,923
1929	11,270	4,073

Cork Disks, Wafers or Washers

	Pounds.	Dollars.
1914	2,065,567	1,675,683
1915	1,026,864	1,165,740
1916	695,776	487,588
1917	2,815,515	1,973,342
1918	2,816,018	1,445,851
1919	706,252	552,857
1920	1,377,958	857,525
1921	995,208	688,193
1922	575,463	247,043
1923	844,973	199,063
1924	327,622	307,688
1925	632,238	558,483
1926	996,282	826,946
1927	721,876	640,000
1928	482,642	550,841
1929	530,196	458,802

Cork, Granulated or Ground

	Pounds.	Dollars.
1924	265,249	4,716
1925	354,189	4,203
1926	1,311,760	20,933
1927	1,760,216	31,308
1928	302,056	8,663
1929	55,770	2,230

Cork Insulation

	Pounds.	Dollars.
1917	4,038,372	181,698
1918	3,771,294	181,402
1919	2,834,807	177,389
1920	6,710,418	543,494
1921	9,112,352	779,673
1922	13,353,866	603,165
1923	12,720,305	605,375
1924	20,893,457	728,359
1925	21,598,615	818,333
1926	30,758,475	1,401,858
1927	47,164,341	2,861,616
1928	40,298,873	2,163,339
1929	61,198,268	3,217,338

Cork Paper

	Pounds.	Dollars.
1917	.....	138,214
1918	.....	107,462
1919	.....	105,751
1920	.....	85,349
1921	.....	40,243
1922	.....	23,242
1923	.....	13,119
1924	1,602	1,377
1925	111	774
1926	383	1,085
1927	758	1,346
1928	1,832	908
1929	.....	.....

Cork Stoppers

	Pounds.	Dollars.
1891	.....	428,635
1901	1,286,593	534,064
1914	888,500	728,317
1915	326,887	250,342
1916	269,806	170,740
1917	437,553	275,161
1918	365,877	198,378
1919	119,000	69,657
1920	139,829	120,389
1921	218,932	156,512
1922	136,118	87,696
1923	209,677	137,674
1924	272,784	359,869
1925	307,351	413,803
1926	515,692	405,475
1927	427,434	534,462
1928	476,304	761,961
1929	433,087	398,393

Cork Tile

	*Sq. ft.	Dollars.
1924	16,800	1,875
1925	88,968	7,981
1926	1,020,817	54,535
1927	584,416	79,828
1928	571,978	40,217
1929	490,363	62,357

*Quantity stated in pounds prior to 1927.

Cork Waste, Shavings and Refuse

	Pounds.	Dollars.
1917	120,677,624	1,743,184
1918	95,051,164	1,582,755
1919	101,762,928	1,827,541
1920	146,649,475	2,813,247
1921	130,669,984	2,161,790
1922	151,425,654	2,051,339
1923	167,371,170	2,082,557
1924	150,081,056	1,656,009
1925	138,908,958	1,486,135
1926	153,804,449	1,950,273
1927	131,531,424	2,518,576
1928	101,101,424	2,370,498
1929	180,971,007	4,444,102

Corkwood, or Cork Bark, Unmanufactured

	Pounds.	Dollars.
1871	.....	359,626
1881	.....	787,933
1891	.....	1,249,008
1901	.....	1,727,921
1913	133,227,878	3,152,070
1914	88,282,529	2,646,018
1915	24,897,803	1,420,581
1916	32,866,700	1,517,366
1917	40,273,005	2,125,633
1918	30,750,497	1,479,072
1919	26,505,971	1,736,100
1920	27,376,326	1,456,276
1921	47,804,241	2,373,006
1922	37,434,747	1,023,587
1923	68,817,945	1,826,133
1924	57,324,032	1,541,330
1925	66,857,680	1,265,806
1926	110,468,994	2,350,144
1927	132,581,634	3,088,008
1928	101,149,207	3,053,915
1929	75,919,151	2,780,159

Corrosive Sublimate

	Pounds.	Dollars.
1920	3,306	2,258
1921	665	683
1922	.....	.....
1923	97	94
1924	3,952	2,044
1925	1,402	877
1926	1,482	825
1927	3,979	4,440
1928	2,262	3,069
1929	.....	.....

Cosmetics and Toilet Preparations, Including Tooth Pastes, Powders, Etc.

	Pounds.	Dollars.
1913	.....	1,026,369
1914	.....	1,086,211
1915	.....	1,542,131
1916	.....	1,271,614
1917	.....	1,702,939
1918	.....	1,502,713
1919	817,171	1,549,184
1920	903,275	455,691
1921	399,657	410,854
1922	1,250,502	844,575
1923	1,346,505	804,433
1924	1,221,220	718,969

Subdivided after 1924.

Cosmetics and Toilet Preparations, Including Tooth Paste, Powders, Etc., Containing Alcohol

	Pounds.	Dollars.
1925	77,220	179,726
1926	58,879	140,538
1927	44,182	102,390
1928	40,367	108,215
1929	55,580	138,778

Cosmetics and Toilet Preparations, Including Tooth Paste, Powders, Etc., Not Containing Alcohol

		Dollars.
1925	.....	576,070
1926	.....	552,340
1927	.....	663,868
1928	.....	613,315
1929	.....	703,036

Crayons, Including Charcoal Crayons or Fusains

	*Gross.	Dollars.
1871	.....	2,582
1881	.....	10,047
1891	.....	18,028
1901	.....	9,030
1913	.....	12,925
1914	.....	18,359
1915	.....	15,090
1916	.....	11,535
1917	.....	12,945
1918	.....	10,282
1919	14,330	11,376
1920	16,777	11,284
1921	40,673	16,363
1922	97,358	27,525
1923	50,660	20,212
1924	29,663	25,443
1925	22,392	15,794
1926	25,945	20,747
1927	29,512	22,971
1928	49,969	29,024
1929	38,877	31,936

*Quantity stated in pounds prior to 1925.

Cream of Tartar

	Pounds.	Dollars.
1871	3,605,401	639,467
1881	23	3
1891	778	158
1901	145	59
1913	66,718	11,797
1914	812,537	156,987
1915	764,868	166,922
1916	38,588	13,479
1917	98,639	28,489
1918	63,586	16,068
1919	.....	.....
1920	123,017	52,300
1921	578,641	166,048
1923	1,285,977	230,346
1924	1,823,108	230,538
1925	652,129	69,585
1926	318,532	43,342
1927	218,392	31,632
1928	194,414	39,330
1929	242,481	40,670

Crotonaldehyde

	Pounds.	Dollars.
1924	2,672	329
1925	9,102	3,539
1926	6,449	1,248
1927	38,948	8,672
1928	.....	.....

Crucibles, Graphite

	Number.	Dollars.
1924	1,555	450
1925	.....	.....
1926	9,588	7,394
1927	5,524	6,850
1928	836	1,523
1929	2,386	1,243

Crucibles of Stone and Earthenware, Undecorated

	Number.	Dollars.
1914	.....	10,974
1915	.....	6,764
1916	.....	7,641
1917	.....	58,161
1918	.....	7,860
1919	.....	1,432
1920	.....	9,880
1921	.....	8,634
1922	.....	6,951
1923	.....	10,586
1924	99,309	8,680
1925	62,135	6,111
1926	154,114	8,502
1927	100,405	6,702
1928	110,917	7,480
1929	169,587	10,637

Cryolite, or Kryolith

	Tons.	Dollars.
1871	.....	71,058
1881	.....	103,529
1891	7,129	95,495
1901	6,167	82,533
1913	2,519	52,440
1914	2,157	47,435
1915	4,569	91,417
1916	3,962	84,497
1917	3,835	163,475
1918	4,383	218,600
1919	19,951	97,500
1920	2,130	106,500
1921	3,866	194,158
1922	3,477	296,888
1923	5,125	256,759
1924	5,130	257,200
1925	6,345	324,790
1926	9,892	699,286
1927	7,713	564,233
1928	5,165	427,747
1929	7,384	580,176

Cubebs

	Pounds.	Dollars.
1871	64,431	3,686
1881	131,850	21,505
1891	65,404	46,530
1901	310,172	22,248
1913	166,307	53,663
1914	105,665	32,456
1915	87,538	23,451
1916	89,300	28,566
1917	123,558	43,442
1918	76,895	45,034
1919	147,604	57,564
1920	139,158	103,026
1921	127,667	121,595
1922	40,482	23,074
1923	106,068	64,726
1924	91,087	43,558
1925	55,018	25,959
1926	95,279	35,566
1927	71,675	22,065
1928	90,695	24,916
1929	51,377	13,256

Cudbear, Archil and Litmus

	Pounds.	Dollars.
1871	.....	40,253
1881	1,931,357	232,360
1891	402,241	37,889
1901	44,332	2,964
1913	27,971	1,775
1914	15,653	1,061
1915	24,827	1,680
1916	56,948	6,512
1917	49,163	6,105
1918	62,504	10,166
1919	44,432	6,012
1920	34,004	4,857
1921	46,647	7,874
1922	29,059	4,984
1923	.....	.....
1924	261,866	29,835
1925	179,255	27,089
1926	160,616	21,429
1927	150,804	25,937
1928	134,687	25,535
1929	78,316	14,926

Cumene, Cymene

	Pounds.	Dollars.
1925	499	135
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Curry and Curry Powder

	Pounds.	Dollars.
1871	.....	569
1881	.....	3,893
1891	.....	5,103
1901	.....	7,852
1913	.....	12,087
1914	.....	11,807
1915	.....	9,872
1916	.....	8,690
1917	.....	10,624
1918	.....	9,248
1919	11,800	4,606
1920	35,975	13,651
1921	32,403	10,206
1922	20,537	8,465
1923	19,871	8,433
1924	31,464	12,436
1925	31,708	11,661
1926	33,732	13,925
1927	37,903	15,840
1928	36,680	15,580
1929	79,185	11,572

Cutch Extract

	Pounds.	Dollars.
1924	540,161	37,124
1925	422,719	31,541
1926	319,414	29,558
1927	692,136	41,948
1928	273,322	19,616
1929	611,697	25,314

Cuttlefish Bone

	Pounds.	Dollars.
1901	193,494	23,590
1913	218,317	30,355
1914	309,540	56,051
1915	282,239	52,041
1916	214,659	36,576
1917	230,271	52,838
1918	247,250	57,536
1919	186,633	73,380
1920	360,538	122,047
1921	375,251	86,312
1922	206,028	29,020
1924	345,245	43,947
1925	248,461	39,539
1926	298,205	41,519
1927	257,993	27,229
1928	306,943	40,126
1929	279,514	38,317

Cyanide Salts, Mixtures, and Compounds

	Pounds.	Dollars.
1924	1,027,978	71,438
1925	230,239	19,572
1926	128,763	9,303
1927	66,151	64,260
1928	227,095	98,906
1929	630,645	223,776

Dandelion Root

	Pounds.	Dollars.
1881	33,119	2,966
1891	59,929	3,593
1901	73,573	4,078
1913	108,434	8,269
1914	109,656	9,389
1915	112,814	12,137
1916	29,378	6,487
1917	108,713	23,912
1918	149,088	37,773
1919	77,165	16,600
1920	201,708	28,139
1921	182,907	29,021
1922	114,808	6,989
1923	97,564	9,209

Included in "Acorns, Chicory and Dandelion Root" after 1923.

Decalcomania Paper, Duplex, Not Printed

	Pounds.	Dollars.
1927	700,052	162,978
1928	667,537	155,546
1929	642,943	152,928

Decalcomanias in Ceramic Colors

	Pounds.	Dollars.
1913	80,094	144,890
1914	45,999	92,528
1915	22,411	62,462
1916	11,176	32,882
1917	8,471	27,393
1918	5,195	22,206
1919	2,984	14,304
1920	4,905	19,616
1921	6,301	30,741
1922	2,842	19,362
1923	94,073	136,331
1924	198,329	293,167
1925	233,134	338,948
1926	317,073	462,385
1927	364,927	486,683
1928	360,497	473,783
1929	414,973	520,382

Decalcomanias Backed with Metal Leaf

	Pounds.	Dollars.
1924	138	327
1925	886	1,529
1926	29	151
1927	127	944
1928	33	310
1929	51	519

Decalcomanias, Other, Except Toys

	Pounds.	Dollars.
1913	41,370	42,001
1914	132,905	131,494
1915	90,040	87,641
1916	51,840	55,634
1917	66,513	60,844
1918	34,858	41,300
1919	55,236	85,068
1920	71,740	78,516
1921	137,825	181,380
1922	138,244	181,071
1923	53,539	61,522
1924	41,884	52,564
1925	33,966	55,253
1926	43,033	73,824
1927	53,163	74,023
1928	41,423	75,970
1929	46,826	74,432

Dextrin, Dextrin Substitutes, Burnt Starch or British Gum and Soluble or Chemically Treated Starch

	Pounds.	Dollars.
1914	471,491	18,180
1915	274,668	12,028
1916	154,382	10,049
1917	32,773	2,855
1918	505	50
1919	.....	.....
1920	77,238	6,764
1921	238,767	13,954
1922	302,022	15,982
1923	137,158	6,018
1924	110,537	4,141
1925	49,282	2,277
1926	97,632	8,451
1927	7,405	797
1928	697,234	84,378
1929	1,624,228	83,736

Imports Into the United States

Dextrin Made from Potato Starch or Potato Flour

	Pounds.	Dollars.
1914	5,226,421	162,688
1915	4,595,949	154,337
1916	720,106	40,279
1917	210,948	17,884
1918	99,238	9,116
1919	421,971	39,533
1920	681,224	59,387
1921	566,670	35,824
1922	1,367,844	80,858
1923	1,711,615	66,956
1924	1,794,571	74,618
1925	1,131,582	59,542
1926	1,445,793	66,649
1927	1,199,853	57,206
1928	1,416,607	69,693
1929	1,183,374	58,233

Dextrose and Dextrose Syrup

	Pounds.	Dollars.
1924	33,266	1,344
1925	1,599	189
1926	.....	.....
1927	1,359	353
1928	2,815	318
1929	.....	.....

Diamonds, Glaziers', Engravers' and Miners', Unset

	Carats.	Dollars
1871	.....	976
1881	.....	233,596
1891	.....	407,188
1901	.....	4,071
1913	.....	868,241
1914	.....	101,839
1915	.....	258,272
1916	.....	738,695
1917	.....	948,592
1918	.....	1,049,975
1919	18,793	632,129
1920	42,161	1,270,040
1921	41,058	1,088,441
1922	20,927	458,562
1923	36,611	1,017,689
1924	32,174	1,098,337
1925	44,455	1,559,377
1926	43,003	2,050,758
1927	39,969	2,026,788
1928	39,093	2,620,105
1929	40,710	3,380,141

Digitalis

	Pounds.	Dollars.
1924	16,777	1,756
1925	20,190	1,543
1926	36,276	5,815
1927	60,529	9,317
1928	70,518	13,984
1929	66,006	44,028

Digitalis Glucosides and Active Principles of Digitalis

	Pounds.	Dollars.
1924	36	1,614
1925	50	177

Not stated after 1925.

Dihydroxynaphthalene and Dianisidin

	Pounds.	Dollars.
1926	1,000	540
1927	55	142
1928	10,750	6,683
1929	1,950	1,180

Dimethylanilin and Benzylethylanilin

	Pounds.	Dollars.
1921	8,188,532	165,639
1922	23,565	3,828
1923	1	2
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	2,383	2,216
1928	.....	.....
1929	.....	.....

Diphenylamine

	Pounds.	Dollars.
1924	1,131	218
1925	23,587	8,158
1927	400	1,315
1926	32	104
1928	12,250	13,342
1929	4,900	5,736

Divi-Divi

	Pounds.	Dollars.
1901	853,573	12,505
1913	314,491	4,143
1914	29,032	461
1915	4,513,219	71,367
1916	16,467,455	310,572
1917	15,969,144	293,191
1918	15,739,331	274,891
1919	26,556,867	522,913
1920	26,632,840	580,972
1922	7,558,995	91,405
1923	11,153,869	145,125
1924	4,923,697	78,589
1925	3,912,016	79,707
1926	1,764,547	35,641
1927	3,646,775	80,226
1928	1,607,320	40,457
1929	2,443,694	58,195

Divi-Divi Extract for Tanning

	Pounds.	Dollars.
1926	1,202	67
1927	.....	.....
1928	.....	.....
1929	.....	.....

Dyeing Materials, Crude, Not Elsewhere Specified

	*Pounds.	Dollars.
1871	16,598	647,224
1881	4,947	159,900
1891	1,002	28,960
1901	14,985	151,849
1913	155	1,794
1914	371	6,097
1915	1,530	20,674
1916	7,043	172,765
1917	6,745	48,211
1918	16,489	425,942
1919	2,153	52,196
1920	2,339	49,913
1921	2,342	51,082
1922	4,731	118,406
1923	14,663	477,328
1923	6,912,336	174,955
1925	9,140,366	152,334
1926	7,250,262	111,016
1927	7,059,379	66,473
1928	8,192,131	50,350
1929	9,501,063	55,556

* Quantity stated in tons prior to 1923.

Dye Extracts, Nonalcoholic and Not Medicinal

	Pounds.	Dollars.
1924	1,297,786	118,455
1925	511,139	72,585
1926	241,277	27,504
1927	580,697	65,760
1928	330,311	32,089
1929	575,324	34,630

Eggs, Dried

	Pounds.	Dollars.
1913	20,284	7,537
1914	38,061	12,040
1915	30,575	10,385
1916	38,993	9,875
1917	1,590,563	417,417
1918	1,598,630	429,167
1919	741,972	419,799
1920	3,311,350	1,512,648
1921	2,419,997	1,086,318
1922	1,964,725	730,919
1923	2,355,214	584,016
1924	2,004,458	840,063
1925	2,218,571	1,045,553
1926	1,913,884	1,021,307
1927	1,603,075	819,493
1928	530,836	278,536
1929	1,148,481	634,030

Eggs, Frozen or Otherwise Prepared or Preserved

	Pounds.	Dollars.
1914	2,647,974	305,232
1915	2,815,511	198,654
1916	3,756,188	248,997
1917	2,171,338	178,627
1918	1,250,574	153,870
1919	1,210,321	245,494
1920	6,579,489	1,030,364
1921	10,133,235	1,593,782
1922	6,351,612	678,364
1923	5,546,892	612,040
1924	5,324,991	824,476
1925	9,181,565	1,358,594
1926	10,252,586	1,587,544
1927	9,041,405	1,633,202
1928	689,529	117,850
1929	11,793,822	2,170,122

Eggs, Poultry, in the Shell

	Dozens.	Dollars.
1871	.....	569,493
1881	8,569,568	1,087,250
1891	8,219,339	1,186,074
1901	127,685	10,572
1913	1,271,765	191,714
1914	5,823,749	1,059,595
1915	3,058,863	440,067
1916	733,313	110,638
1917	1,103,187	267,822
1918	1,619,259	482,636
1919	846,573	232,491
1920	1,348,383	466,753
1921	3,315,805	1,056,359
1922	1,223,540	327,566
1923	533,659	158,584
1924	372,507	110,488
1925	550,006	159,588
1926	275,873	97,912
1927	295,672	96,564
1928	256,943	77,227
1929	291,318	85,816

Egg Yolks

	Pounds.	Dollars.
1881	.....	2,454
1891	.....	18
1901	.....	195
1913	227,457	37,977
1914	675,658	168,972
1915	1,382,408	257,607
1916	2,919,919	373,152
1917	6,924,071	1,332,095
1918	8,077,730	2,029,420
1919	4,746,015	1,648,564
1920	9,044,186	3,909,927
1921	10,312,080	3,206,752
1922	8,379,098	1,873,490
1923	6,572,885	1,433,828

Subdivided after 1923.

Egg Yolks, Dried

	Pounds.	Dollars.
1924	3,067,153	904,563
1925	4,775,757	1,236,180
1926	5,912,393	1,552,840
1927	4,063,733	1,366,025
1928	3,424,639	1,560,521
1929	5,105,135	2,324,229

Egg Yolks, Frozen or Otherwise Prepared

	Pounds.	Dollars.
1924	3,272,392	569,887
1925	5,640,653	950,899
1926	4,849,098	819,478
1927	4,537,387	798,933
1928	1,402,396	229,027
1929	3,337,663	738,838

Ergot

	Pounds.	Dollars.
1871	17,805	6,898
1881	137,618	45,156
1891	88,620	26,932
1901	164,446	80,952
1913	223,793	208,364
1914	185,704	102,640
1915	141,915	92,459
1916	12,015	73,896
1917	165,701	80,647
1918	140,474	81,267
1919	116,813	149,890
1920	125,021	301,558
1921	213,491	690,224
1922	167,315	155,921
1923	273,784	140,055
1924	195,425	52,307
1925	163,759	45,778
1926	192,056	113,180
1927	224,622	195,140
1928	252,058	265,808
1929	300,867	209,194

Ethers, Amyl Acetate

	Pounds.	Dollars.
1924	13,065	4,426
1925	6,921	2,336
1926	18,692	7,154
1927	626	334
1928	84	54
1929	455	157

Ethers, Butyl Acetate

	Pounds.	Dollars.
*1928	1,673,521	225,938
1929	.....	.....

* January-June.

Ethers, Diethyl Sulphate

	Pounds.	Dollars.
1924	83	246
1925	375	1,353
1926	311	2,035
1927	30,066	7,221
1928	22,447	5,549
1929	21,334	4,577

Ethers, Dimethyl Sulphate

	Pounds.	Dollars.
1928	4,410	944
1929	723	131

Ethers, Ethyl Acetate, or Acetic Ether

	Pounds.	Dollars.
1920	400	493
1921	.....	.....
1922	230	284
1923	27,168	11,658
1924	267	40
1925	1,141	719
1926	12,477	1,621
1927	21	4
1928	3,748	391
1929	54	50

Ethers, Ethyl Chloride

	Pounds.	Dollars.
1913	11,241	7,903
1914	9,014	10,046
1915	.....	.....
1916	2,780	5,193
1917	8,917	5,207
1918	1,274	2,411
1919	22,495	2,250
1920	877	685
1921	7,009	6,482
1922	13,150	2,757
1923	17,835	19,850
1924	7,187	8,839
1925	15,462	18,146
1926	855	1,088
1927	642	749
1928	132	172
1929	381	206

Ethers, Ethyl Chlorocarbonate

	Pounds.	Dollars.
1929	8,072,564	1,029,615

Ethers, Sulphuric

	Pounds.	Dollars.
1891	8	1
1901	109	30
1913	755	120
1914	915	131
1915	849	189
1916	62	23
1917	.....	.....
1918	8	7
1919	282,576	28,258
1920	100	34
1921	.....	.....
1922	988	384
1923	134	27
1924	50	80
1925	72	110
1926	11	22
1927	.....	.....
1928	22	12
1929	661	96

Ethers, Containing Not More than 10 Percent Alcohol, N. E. S.

	Pounds.	Dollars.
1921	269	796
1922	2,177	1,068
1923	7,125	4,220
1924	10,683	5,457
1925	46,694	21,175
1926	77,693	41,112
1927	2,717,789	410,897
1928	3,929,410	584,389
1929	89,370	33,730

Ethers, Containing More than 10 Percent Alcohol, N. E. S.

	Pounds.	Dollars.
1901	698	1,119
1914	.....	1,868
1915	66	64
1916	140	169
1917	.....	.....
1918	880	182
1919	.....	.....
1920	.....	.....
1921	240	274
1922	1,316	1,319
1923	50,867	6,055
1924	1,247	1,505
1925	7,192	14,331
1926	1,000	1,132
1927	2	3
1928	51	56
1929	6,217	4,506

Ethylene Chlorohydrin, Dichloride, Glycol, and Oxide

	Pounds.	Dollars.
1925	25,124	10,934
1926	1,711	831

Stated separately after 1926.

Ethylene Dibromide

	Pounds.	Dollars.
*1928	132,205	39,134
1929	244,015	70,453

* Six months, January-June.

Ethylenechlorohydrin

	Pounds.	Dollars.
1927	882	412
1928	.....	.....
1929	11	7

Ethyleneglycol

	Pounds.	Dollars.
1927	1,577	429
1928	12	3
1929	91	17

Eucalyptol

	Pounds.	Dollars.
1924	3,960	403
1925	120	123
1926	899	331
1927	884	534
1928	1,003	769
1929	100	77

Explosives from Coal Tar

	Pounds.	Dollars.
1872	.....	40,119
1881	.....	42,994
1891	.....	.....
1901	31,638	8,554
1913	85,068	18,339
1914	.....	.....
1915	20,091	4,276
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	3,240,500	254,885
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	462	1,373
1924	1,518	2,955
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Ferric Chloride (Iron Perchloride)

	Pounds.	Dollars.
1924	114,988	6,644
1925	62,579	3,704
1926	187,889	17,771
1927	528,339	15,484
1928	664,859	18,664
1929	928,112	24,909

Ferromanganese

	Tons.	Dollars.
1919	24,006	4,120,794
1920	38,973	3,980,745
1921	43,198	6,057,902
1922	31,164	1,877,094
1923	118,435	8,770,334
1924	56,776	4,605,681
1925	68,405	5,902,225
1926	48,197	4,766,798
1927	33,704	2,229,878
1928	49,731	4,780,739
1929	52,950	5,625,825

Ferrophosphorus

	*Pounds.	Dollars.
1913	81	3,689
1914	26	1,136
1915	27	1,213
1916	12	617
1917	85	5,458
1918	10	1,055
1919	109,141	3,639
1920	61,665	2,207
1921	14,000	780
1922	11,997	132
1923	.....	.....
1924	.....	.....
1925	4,760	460
1926	99,207	3,377
1927	4,341,132	143,937
1928	3,782,027	126,055
1929	1,544,268	56,639

* Quantity stated in tons prior to 1919.

Ferrosilicon

	*Pounds.	Dollars.
1919	6,091	521,142
1920	17,855	891,108
1921	7,361	397,991
1922	10,977	524,355
1923	18,511	1,232,251
1924	25,863,275	1,171,735
1925	11,186,238	451,944
1926	15,818,765	807,329
1927	29,143,719	1,428,030
1928	9,055,982	506,297
1929	15,583,086	1,067,259

*Quantity stated in tons prior to 1924.

Ferrovanadium

	Pounds.	Dollars.
1920	19,189	39,254
1921	.....	.....
1922	.....	.....
1923	1,160	3,770
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	1,058	328
1928	.....	.....
1929	341,592	304,937

Fertilizers Compounded or Chemically Combined Containing Nitrogen, Phosphoric Acid, and Potash

	Tons.	Dollars.
1929	5,312	390,252

Fertilizers, Tankage

	Tons.	Dollars.
1925	29,792	914,459
1926	25,434	959,792
1927	23,286	951,089
1928	42,140	1,185,675
1929	22,586	929,375

Fertilizers, Not Specially Provided For

	Tons.	Dollars.
1891	14,792	221,467
1901	72,239	640,428
1913	115,257	2,190,816
1914	197,165	4,241,285
1915	100,155	2,208,193
1916	73,252	1,591,517
1917	71,374	1,521,307
1918	63,815	1,772,684
1919	55,775	2,260,253
1920	123,287	4,752,048
1921	113,353	5,434,425
1922	89,667	2,396,817
1923	117,426	3,646,490
1924	110,943	2,338,149
1925	37,429	684,617
1926	154,766	3,154,204
1927	85,607	1,589,167
1928	76,484	1,688,224
1929	860	55,648

Filter Masse or Filter Stock

	Pounds.	Dollars
1914	489,476	53,074
1915	349,498	41,880
1916	54,349	8,356
1917	65,052	10,304
1918	48,210	13,917
1919	6,605	1,097
1920	65,750	9,048
1921	146,282	26,455
1922	109,089	11,792
1923	171,008	18,043
1924	274,358	27,263
1925	203,674	26,348
1926	254,542	40,382
1927	262,516	37,743
1928	374,616	67,904
1929	305,290	69,390

Filter Tubes

	Number.	Dollars.
1901	.....	6,053
1913	.....	6,038
1914	.....	7,437
1915	.....	6,639
1916	.....	2,769
1917	.....	7,359
1918	.....	3,135
1919	.....	2,481
1920	.....	3,105
1921	.....	2,832
1922	.....	630
1923	.....	693
1924	104,410	2,409
1925	.....	.....
1926	.....	.....
1927	50	144
1928	.....	.....
1929	12	5

Filtering Paper

	Pounds.	Dollars.
1924	589,088	190,354
1925	527,486	197,600
1926	602,345	206,193
1927	579,820	231,463
1928	539,416	241,735
1929	590,580	283,648

Fish Sounds, Crude

	Pounds.	Dollars.
1916	396,031	96,201
1917	456,738	104,654
1918	331,248	78,499
1919	150,411	38,876
1920	80,781	9,210
1921	131,136	31,051
1922	38,486	11,242
1923	44,724	8,120
1924	112,292	28,023
1925	147,653	40,067
1926	131,091	40,472
1927	85,152	17,600
1928	51,508	6,972
1929	64,753	11,223

Imports Into the United States

Flavoring Extracts

	Pounds.	Dollars.
1918	4,938	6,388
1919	3,431	11,293
1920	5,057	9,173
1921	43,625	30,693
1922	671,523	409,930
1923	772,164	387,240

Subdivided after 1923.

Flavoring Extracts Containing No Alcohol

	Pounds.	Dollars.
1924	89,607	67,061
1925	83,637	51,731
1926	93,372	57,061
1927	106,414	76,389
1928	79,227	56,973
1929	55,148	57,832

Flavoring Extracts. Containing Alcohol

	Pounds.	Dollars.
1924	73,690	38,599
1925	97,025	92,340
1926	126,813	122,426
1927	106,398	134,954
1928	94,053	134,474
1929	39,268	60,193

Flavors (Coaltar Product)

	Pounds.	Dollars.
1924	11	13
1925	.....	.....
1926	2	33
1927	.....	.....
1928	715	881
1929	165	413

Floral Essences and Concretes

	Pounds.	Dollars.
1914	.....	87,000
1915	.....	145,973
1916	.....	265,956
1917	.....	408,936
1918	.....	250,531
1919	.....	84,610
1920	.....	174,097
1921	.....	176,198
1922	.....	185,859
1923	.....	989,811
1924	23,736	1,034,494
1925	39,370	2,251,766
1926	18,382	1,246,744
1927	15,901	1,472,903
1928	11,821	1,217,394
1929	12,268	1,289,255

Floral and Flower Waters Containing No Alcohol, N. E. S.

	*Gallons.	Dollars.
1913	.....	31,710
1914	.....	50,297
1915	.....	22,216
1916	.....	34,461
1917	.....	29,279
1918	.....	52,253
1919	.....	274,648
1920	.....	28,992
1921	.....	61,407
1922	.....	24,156
1923	.....	25,056
1924	198,086	18,402
1925	121,905	15,232
1926	129,276	15,083
1927	93,169	16,793
1928	31,348	21,388
1929	34,072	21,660

* Stated in pounds prior to 1927.

Fluorspar, Containing Not More Than 93% Calcium Fluoride

	Tons.	Dollars.
1929	6,942	63,564

Fluorspar, Other

	Tons.	Dollars.
1913	23,786	77,535
1914	13,663	50,943
1915	6,925	27,951
1916	8,808	32,482
1917	12,008	87,380
1918	10,936	117,279
1919	10,367	169,605
1920	11,312	146,151
1921	18,068	219,557
1922	8,661	86,678
1923	14,454	378,443
1924	47,366	567,109
1925	49,175	570,641
1926	44,413	487,600
1927	70,607	698,406
1928	44,716	442,901
1929	43,033	430,594

Formaldehyde Solution

	Pounds.	Dollars.
1914	14,228	1,443
1915	7,700	814
1916	79,857	8,054
1917	23,935	2,349
1918	223,402	40,691
1919	162	71
1920	195,878	92,944
1921	274,000	125,819
1922	45,594	8,246
1923	466	117
1924	.....	....
1925	9	16
1926	396	431
1927	1,347	89
1928	4,188	194
1929	.....	.....

Fuller's Earth

	Tons.	Dollars.
1911	15,813	125,899
1912	16,175	138,111
1913	16,866	145,588
1914	19,367	174,276

Subdivided after 1914; see below.

Fuller's Earth Unwrought and Unmanufactured

	Tons.	Dollars.
1871	326	3,383
1881	268	3,207
1891	.....	.....
1901	2,653	16,066
1915	745	5,268
1916	1,067	7,825
1917	975	7,846
1918	1,348	14,552
1919	657	7,800
1920	334	6,413
1921	1,222	16,561
1922	394	5,721
1923	850	12,569
1924	284	3,485
1925	213	2,671
1926	213	2,751
1927	216	3,255
1928	462	6,015
1929	512	12,190

Fuller's Earth, Wrought or Manufactured

	Tons.	Dollars.
1901	7,352	55,450
1915	18,754	163,540
1916	14,973	135,845
1917	15,077	159,071
1918	13,435	177,102
1919	13,036	205,219
1920	14,461	199,284
1921	11,015	145,377
1922	8,537	122,261
1923	9,634	142,093
1924	5,901	85,171
1925	6,608	98,420
1926	7,839	120,772
1927	6,607	101,490
1928	5,776	107,182
1929	7,095	139,131

Fustic

	*Pounds.	Dollars.
1881	8,677	130,490
1891	9,100	132,842
1901	7,140	83,695
1913	3,785	53,303
1914	7,121	100,501
1915	12,354	179,959
1916	17,469	289,913
1917	5,195	142,431
1918	16,259	435,428
1919	4,486	83,096
1920	929	16,567
1921	2,504	36,683
1922	4,390	85,912
1923	4,335	67,249
1924	10,927,089	87,529
1925	5,137,250	42,522
1926	9,622,638	71,030
1927	9,034,854	65,516
1928	6,285,136	48,912
1929	4,923,066	32,012

* Quantity stated in tons prior to 1924.

Fustic Extract

	Pounds.	Dollars.
1924	112	22
1925	579	170
1926	7,586	2,426
1927	11,220	2,821
1928	.....	.....
1929	.....	.....

Gas Black

	Pounds.	Dollars.
1926	130	8
1927	2,100	210
1928	97	10
1929	.....	.....

Gas Liquor, Ammoniacal

	Pounds.	Dollars.
1913	.....	35,245
1914	.....	29,336
1915	.....	31,466
1916	.....	26,733
1917	.....	23,335
1918	.....	5,059
1919	.....	.....
1920	.....	18,672
1921	.....	7,571
1922	.....	35,156
1923	.....	24,819
1924	734,227	20,566
1925	1,561,747	40,563
1926	115,871	4,673
1927	736,125	2,226
1928	10	10
1929	.....	.....

Gelatin, Unmanufactured, Edible

	Pounds.	Dollars.
1871	.....	55,095
1891	533,812	251,833
1901	700,770	303,054
1913	1,085,940	279,802
1914	2,439,440	768,215
1915	2,708,362	916,368
1916	1,657,065	319,173
1917	967,920	309,524
1918	369,115	133,873
1919	183,716	99,068
1920	1,112,569	573,889
1921	2,262,392	1,171,256
1922	2,460,908	959,719
1923	2,600,118	840,499
1924	3,379,917	871,071
1925	3,124,789	664,507
1926	2,757,499	572,967
1927	2,520,883	480,325
1928	1,868,560	398,335
1929	2,951,216	692,408

Gelatin, Unmanufactured, Inedible

	Pounds.	Dollars.
1926	911,217	523,503
1927	1,733,401	932,488
1928	1,491,493	833,119
1929	1,538,298	802,297

Gentian Root

	Pounds.	Dollars.
1881	102,297	3,393
1891	214,645	5,943
1901	574,212	16,758
1913	1,796,928	88,281
1914	2,181,935	109,119
1915	1,022,252	55,553
1916	788,307	63,240
1917	1,780,044	218,377
1918	382,590	46,616
1919	188,402	26,663
1920	913,343	92,524
1921	1,051,380	78,862
1922	206,656	13,062
1923	663,685	45,766
1924	523,266	31,646
1925	769,119	39,821
1926	595,272	29,834
1927	444,943	24,212
1928	505,253	32,177
1929	676,605	45,170

Ginger Root, Unground, Not Preserved or Candied

	Pounds.	Dollars.
1901	3,507,680	194,605
1913	7,856,401	406,197
1914	3,006,132	145,792
1915	3,310,391	156,973
1916	5,593,845	391,965
1917	4,307,279	411,965
1918	5,157,531	431,245
1919	2,386,044	212,975
1920	9,068,228	1,205,962
1921	4,649,429	583,362
1922	6,071,760	583,301
1923	5,610,993	614,803
1924	4,248,426	560,291
1925	4,304,720	590,440
1926	3,723,550	382,962
1927	4,361,829	321,898
1928	4,097,669	326,647
1929	3,588,497	364,461

Ginger Root, Ground

	Pounds.	Dollars.
1928	1,505	53
1929	119	186

Ginseng

	Pounds.	Dollars.
1924	9,424	42,566
1925	10,319	99,517
1926	5,426	45,246
1927	7,982	63,449
1928	10,193	79,270
1929	9,926	75,380

Gland Extracts, Suprarenal, Thyroid and Other

	Pounds.	Dollars.
1926	.....	150
1927	300	2,917
1928	4	1,103
1929	.....	48

Glass Sand

	Tons.	Dollars.
1924	610	2,001
1925	6,365	2,622
1926	6,549	5,599
1927	2,102	8,826
1928	9,672	10,980
1929	33,743	29,764

Glass Bottles, Vials and Jars, Plain Green or Colored, Molded or Pressed, and Flint, Lime, or Lead, Empty

	Pounds.	Dollars.
1913	.....	205,267
1914	.....	214,130
1915	3,561,200	83,688
1916	1,351,813	24,049
1917	850,946	19,231
1918	114,725	5,635
1919	199,869	7,531
1920	485,891	25,593
1921	1,481,864	91,008
1922	1,401,725	67,923

Quantity not stated prior to 1915.
Not stated separately after 1922.

Glass Bottles and Bottle Glassware, Blown in a Mold, or Otherwise

	Pounds.	Dollars.
1919	126,995	32,874
1920	81,665	32,801
1921	183,926	19,065
1922	335,116	34,444
1923	152,035	55,366
1924	150,366	81,331
1925	207,617	128,582
1926	.....	136,808
1927	.....	187,263
1928	.....	146,783
1929	.....	146,077

Quantity not stated after 1925.

Glass, Cylinder and Crown, Unpolished, Silvered

	Sq. feet.	Dollars.
1914	56,494	3,993
1915	54,393	2,021
1916	12	1
1917	429	45
1918	8,846	1,159
1919	150	15
1920	5,150	911
1921	7,711	1,843
1922	77,367	10,180

Not stated after 1922.

Glass, Plate—Cast, Polished, Unsilvered

	Sq. feet.	Dollars.
1927	19,747,594	6,417,194
1928	14,180,532	3,399,386
1929	13,340,098	2,778,844

Glass, Plate—Cast, Polished, Unsilvered, When Bent or Decorated, Etc.

	Sq. feet.	Dollars.
1927	158,505	138,949
1928	206,588	163,790
1929	271,625	146,065

Glass, Cylinder, Crown, and Sheet Polished, Not Bent or Decorated

	Sq. feet.	Dollars.
1913	579,129	119,395
1914	615,337	121,814
1915	196,274	36,783
1916	108,578	19,893
1917	.....	.....
1918	255	807
1919	.....	.....
1920	15,176	7,697
1921	131,171	108,770
1922	144,215	59,653
1923	760,964	371,412
1924	872,937	425,939
1925	514,490	203,906
1926	614,724	234,984
1927	389,740	170,766
1928	275,422	117,309
1929	359,585	165,699

Glass, Cylinder, Crown, and Sheet Polished When Bent or Decorated

	Sq. feet.	Dollars.
1913	247,428	60,269
1914	147,482	36,116
1915	43,385	10,076
1916	5,321	1,353
1917	39	67
1918	.....	.....
1919	.....	.....
1920	668	282
1921	2,961	3,426
1922	2,671	508
1923	31,982	20,583
1924	21,892	9,802
1925	16,796	11,971
1926	22,474	10,396
1927	14,107	4,860
1928	8,270	3,261
1929	19,570	8,358

Glass, Plate and Window, Cylinder, Crown, and Sheet Polished, Silvered, Not Bent or Decorated

	Sq. feet.	Dollars.
1914	90,657	20,405
1915	89,346	19,597
1916	8,798	1,905
1917	.....	.....
1918	15	15
1919	.....	.....
1920	22,091	8,302
1921	111,357	156,064
1922	131,251	63,315

Not stated separately after 1922.

Glass, Cylinder and Crown, Silvered, Not Bent or Decorated

	Sq. ft.	Dollars.
1923	211,088	111,855
1924	176,293	90,899
1925	177,298	88,680
1926	117,487	58,734
1927	41,926	18,530
1928	39,067	21,599
1929	29,310	18,985

Glass, Cylinder and Crown, Silvered, Bent or Decorated

	Sq. feet.	Dollars.
1920	11,506	6,058
1921	28	35
1922	7,174	4,971
1923	34,465	15,532
1924	17,330	8,407
1925	94,430	38,426
1926	13,756	6,780
1927	3,645	2,980
1928	3,132	2,359
1929	2,273	1,354

Glass, Plate, Fluted, Rolled, Ribbed or Rough, Containing a Wire Netting

	Sq. feet.	Dollars.
1913	379,219	14,812
1914	436,587	15,207
1915	307,516	12,742
1916	69,272	4,526
1917	18,240	2,002
1918	17,656	2,239
1919	6,978	2,453
1920	19,053	3,940
1921	220,674	19,100
1922	293,718	29,388
1923	1,650,868	128,001
1924	2,379,556	707,076
1925	1,462,304	151,712
1926	1,512,227	114,452
1927	1,275,832	104,006
1928	1,002,235	128,139
1929	1,299,249	189,918

Glass, Plate—Cast, Polished, Unsilvered, Containing a Wire Netting

	Sq. feet.	Dollars.
1913	1,068,427	247,015
1914	2,819,386	631,596
1915	440,718	100,400
1916	12,782	3,778
1917	13,484	13,787
1918	.....	.....
1919	.....	.....
1920	430,253	309,932
1921	3,484,398	3,008,343
1922	4,750,252	2,170,100
1923	3,117,692	1,437,985
1924	119,439	66,568
1925	155,787	77,231
1926	441,748	156,170
1927	246,327	137,678
1928	169,416	33,036
1929	98,059	14,676

Glass Demijohns and Carboys, Covered or Uncovered, Empty

	Pounds.	Dollars.
1914	.....	3,899
1915	27,990	890
1916	4,731	298
1917	.....	.....
1918	2,528	209
1919	4,905	3,043
1920	250	16
1921	10,858	3,206
1922	24,639	473

Not stated after 1922.

Glass Plate—Cast, Polished, Unsilvered When Bent or Decorated, Etc., Containing a Wire Netting

	Sq. feet.	Dollars.
1913	88,180	47,449
1914	140,806	62,228
1915	27,121	14,531
1916	7,147	2,726
1917	3,334	1,542
1918	.....	.....
1919	273	210
1920	4,236	2,766
1921	28,396	26,663
1922	115,583	62,217
1923	204,314	131,654
1924	1,064	771
1925	4,109	3,023
1926	9,613	9,674
1927	307,127	104,801
1928	14,436	8,788
1929	15,702	5,603

Glass, Plate—Cast, Polished, Silvered and L. G. Plates, Exceeding in Size 144 Square Inches

	Sq. feet.	Dollars.
1913	832	527
1914	18,229	4,883
1915	2,592	904
1916	2,557	515
1917	35	116
1918	181	82
1919	26	122
1920	6,939	5,459
1921	49,369	38,767
1922	74,312	38,745
1923	110,320	61,317
1924	122,363	39,492
1925	56,145	27,704
1926	97,369	49,859
1927	116,689	48,879
1928	56,791	27,872
1929	21,018	20,208

Glass, Plate—Cast, Polished, Silvered When Bent or Otherwise Decorated

	Sq. feet.	Dollars.
1913	1,510	1,004
1914	19,659	5,854
1915	6,822	2,152
1916	2,570	2,135
1917	14	35
1918	104	94
1919	.....	.....
1920	66	115
1921	45	85
1922	213	508
1923	17,943	11,505
1924	24,926	16,843
1925	4,458	3,519
1926	8,839	5,328
1927	13,762	8,135
1928	7,935	5,444
1929	7,263	8,002

Imports Into the United States

Glass, Window

	Pounds.	Dollars.
1871	37,922,875	1,495,170
1881	45,612,593	1,471,914
1891	61,577,799	1,512,703
1901	29,967,415	970,073

Stated in detail for later years.

Glass, Window—Cylinder, Crown, and Sheet, Unpolished

	Pounds.	Dollars.
1913	20,468,971	804,732
1914	31,197,531	1,212,536
1915	16,532,210	679,228
1916	1,401,572	140,262
1917	2,594,979	277,222
1918	572,614	84,018
1919	360,953	25,616
1920	2,448,115	250,649
1921	29,173,325	1,639,579
1922	50,053,037	2,532,986
1923	49,752,402	2,177,748
1924	36,391,925	1,828,066
1925	40,978,427	2,254,345
1926	58,619,467	2,613,578
1927	88,390,861	3,054,253
1928	71,419,934	2,533,915
1929	76,226,603	2,598,594

Glass, Window—Cylinder, Crown and Sheet, Unpolished When Bent or Decorated.

	Pounds.	Dollars.
1913	1,773,023	153,723
1914	1,703,186	149,203
1915	460,017	56,223
1916	339,009	52,051
1917	370,522	47,069
1918	131,139	19,010
1919	155,103	29,829
1920	735,168	97,321
1921	1,060,676	121,594
1922	755,814	79,795
1923	828,142	117,911
1924	1,070,743	138,999
1925	1,770,580	196,290
1926	2,127,708	221,549
1927	2,879,299	254,154
1928	3,320,191	299,022
1929	5,324,467	441,668

Glass, Plate, Fluted, Rolled, or Ribbed Ground, Smoothed or Obscured

	Sq. feet.	Dollars.
1913	9,617	2,247
1914	614,012	126,917
1915	4,872	1,074
1916	489	124
1917	5,952	402
1918	3,996	391
1919	.....	.....
1920	46,087	34,754
1921	439,004	317,730
1922	298,170	142,171
1923	15,891,418	8,801,516
1924	24,782,875	15,852,610
1925	15,144,470	6,719,074
1926	19,804,179	7,396,500
1927	8,209	4,961
1928	141,582	30,683
1929	101,531	19,632

Glauber's Salt

	Tons.	Dollars.
1871	118	2,879
1881	.....	15
1891	108	2,167
1901	305	6,826
1913	240	5,685
1914	228	5,557
1915	53	1,113
1916	1	33
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	1	36
1921	44	710
1922	7,102	80,710
1923	6,943	76,275
1924	6,312	74,952
1925	5,541	71,405
1926	4,387	54,306
1927	2,870	32,657
1928	2,149	26,441
1929	1,065	11,115

Glazes, Fluxes, Enamels and Colors, Ceramic and Glass

	Pounds.	Dollars.
1914	.....	38,527
1915	.....	70,782
1916	.....	64,138
1917	.....	43,421
1918	.....	26,583
1919	19,046	22,839
1920	45,661	48,090
1921	53,907	60,753
1922	52,627	47,835
1923	150,703	102,213
1924	164,568	107,248

Subdivided after 1924.

Glazes, Fluxes, Enamels and Colors, Ceramic and Glass—Ground or Pulverized

	Pounds.	Dollars.
1925	307,150	107,862
1926	506,743	185,493
1927	345,323	104,305
1928	392,980	105,084
1929	572,862	176,837

Glazes, Fluxes, Enamels and Colors, Ceramic and Glass—In Other Forms

	Pounds.	Dollars.
1925	106,125	42,515
1926	627,991	208,444
1927	538,794	165,742
1928	407,979	100,986
1929	220,053	46,701

Glucose

	Pounds.	Dollars.
1871	.....	412
1881	.....	107,370
1891	815,491	22,038
1901	94,767	2,317
1913	212,635	7,166
1914	262,223	9,025
1915	52,799	1,880
1916	1,233	313
1917	7,696	331
1918	105,551	6,482
1919	400	40
1920	40,267	3,040
1921	59	5
1922	3,631	142

Not stated after 1922.

Glue, Glue Size and Fish Glue Value Less Than 40c. a Pound

	Pounds.	Dollars.
1871	1,578,239	128,528
1881	1,888,005	243,353
1891	5,451,136	485,595
1901	4,530,390	567,992
1913	5,099,661	672,266
1914	22,545,681	1,792,612
1915	8,086,283	702,350
1916	3,050,794	219,177
1917	6,301,825	954,678
1918	2,013,312	342,017
1919	487,617	141,294
1920	1,422,594	373,616
1921	3,214,400	686,322
1922	4,148,656	557,555
1923	6,804,279	699,231
1924	7,401,007	586,863
1925	3,552,007	327,774
1926	6,450,912	507,540
1927	6,817,802	511,497
1928	9,072,691	725,534
1929	10,379,135	953,458

Glue, Glue Size and Fish Glue, Value at 40c. a Pound or More

	Pounds.	Dollars.
1925	16,458	10,429
1926	2,759	2,356
1927	8,652	6,443
1928	2,641	2,158
1929	7,659	6,171

Glue Stock, Including Hide Cuttings, Raw

	Pounds.	Dollars.
1871	.....	123,664
1881	.....	227,131
1891	.....	353,948
1901	.....	1,055,788
1913	.....	1,773,786
1914	.....	2,126,632
1915	.....	1,504,325
1916	.....	970,313
1917	33,631,932	1,451,319
1918	21,415,345	927,923
1919	8,833,386	518,266
1920	26,248,159	1,666,252
1921	36,120,019	2,270,932
1922	25,222,414	1,149,883
1923	29,750,679	1,165,697
1924	28,412,121	1,098,249
1925	29,307,919	1,176,506
1926	38,379,493	1,649,478
1927	46,441,737	1,862,158
1928	43,107,511	1,997,353
1929	57,012,905	2,738,265

Glue, Vegetable

	Pounds.	Dollars.
1924	33,600	2,197
1925	584	74
1926	400	37
1927	168	28
1928	1,427	150
1929	.....	.....

Glycerin, Crude

	Pounds.	Dollars.
1871	213,568	34,498
1881	6,669,531	675,334
1891	11,983,796	974,161
1901	19,393,926	1,603,356
1913	34,399,129	4,247,032
1914	36,230,383	4,473,178
1915	18,661,929	2,185,368
1916	10,875,058	2,209,610
1917	4,078,803	1,260,454
1918	1,925,815	830,145
1919	1,163,952	368,580
1920	15,664,109	1,849,998
1921	11,056,067	1,576,018
1922	2,091,117	287,148
1923	12,893,119	1,289,947
1924	9,848,607	927,346
1925	17,259,224	1,948,994
1926	29,942,635	3,204,945
1927	21,361,098	3,383,618
1928	9,070,705	1,164,189
1929	12,839,399	784,155

Glycerin, Refined

	Pounds.	Dollars.
1891	446,044	45,771
1901	1,195,580	128,940
1913	432,339	73,336
1914	551,306	90,562
1915	360,567	60,908
1916	808,463	132,469
1917	137,128	76,361
1918	19,750	17,438
1919	162,916	67,597
1920	1,911,278	414,316
1921	3,960,671	850,834
1922	75,953	16,649
1923	500,339	58,150
1924	256,671	31,305
1925	9,444,530	1,159,854
1926	3,953,418	676,130
1927	12,138,865	2,755,870
1928	5,020,660	883,900
1929	7,564,272	702,804

Glycol Monoacetate

	Pounds.	Dollars.
1927	2,796	2,638
1928	76,801	8,249
1929	9,860	922

Gold Beaters' Molds and Skins

	Number.	Dollars.
1871	.....	22,632
1881	.....	23,806
1891	.....	39,625
1901	.....	38,556
1913	.....	26,408
1914	.....	26,534
1915	.....	13,944
1916	.....	23,131
1917	.....	38,651
1918	.....	22,909
1919	77,635	9,235
1920	34,239	21,262
1921	22,003	62,918
1922	12,210	41,581
1923	12,366	46,097

Stated separately after 1923.

Gold Beaters' Molds

	Number.	Dollars.
1924	982	50,491
1925	850	47,219
1926	702	62,783
1927	578	62,376
1928	574	52,629
1929	705	64,320

Gold Beaters' Skins

	Number.	Dollars.
1924	56,392	1,410
1925	9,004	604
1926	48,322	3,194
1927	2,950	299
1928	.....	.....
1929	3,200	388

Gold Leaf

	*Leaves (3⅜x3⅜ inches).	Dollars.
1871	161	3,507
1881	451	10,820
1891	167	3,062
1901	115	2,704
1913	30,902	28,283
1914	37,527	32,482
1915	13,614	12,549
1916	1,547	773
1917	14,370	12,463
1918	8,472	6,334
1919	14	10
1920	5,638	3,792
1921	65,999	64,114
1922	53,735	70,962
1923	87,119	106,625
1924	198,287	252,912
1925	11,502,611	142,667
1926	11,303,965	138,449
1927	10,748,490	114,706
1928	3,213,406	34,593
1929	747,151	8,538

* Quantity stated as 100 leaves prior to 1925.

Grease, Enfleurage

	Pounds.	Dollars.
1891	.....	263,950
1901	137,812	246,869
1913	92,446	124,195
1914	40,638	51,417
1915	29,407	31,578
1916	5,245	8,524
1917	26,636	33,945
1918	23,620	167,861
1919	13,357	196,345
1920	9,720	48,979
1921	19,726	241,958
1922	17,268	228,557
1923	20,472	192,432
1924	12,434	19,209
1925	3,384	10,215
1926	3,657	27,523
1927	9,120	17,986
1928	3,813	21,217
1929	784	20,765

Grease, Marrow, Crude

	Pounds.	Dollars.
1918	44,366	8,774
1919	232,960	17,738
1920	37,511	4,035
1921	60,090	4,513
1922	25,243	801
1923	.....	.....
1924	2,198	111
1925	.....	.....
1926	93,474	3,292
1927	2,358	278
1928	109	25
1929	.....	.....

Grease, Wool, Crude

	Pounds.	Dollars.
1891	7,683,090	191,371
1901	11,637,387	260,643
1913	14,473,551	328,901
1914	12,284,248	292,988
1915	9,281,273	286,705
1916	7,617,713	350,535
1917	4,861,795	294,326
1918	4,481,486	338,877
1919	139,436	17,153
1920	2,366,366	140,909
1921	3,396,285	141,057
1922	6,281,426	149,005
1923	11,311,422	342,637
1924	11,167,852	279,445
1925	8,446,879	240,188
1926	10,255,319	367,962
1927	10,417,378	342,035
1928	7,394,800	204,419
1929	8,956,528	218,315

Grease, Wool, Refined

	Pounds.	Dollars.
1913	2,009,018	86,474
1914	2,691,591	121,847
1915	467,761	23,418
1916	214,599	14,794
1917	316,149	24,819
1918	31,218	2,552
1919	1,022	257
1920	44,031	1,504
1921	44,682	3,382
1922	159,528	6,396
1923	926,851	55,083
1924	1,218,880	69,753
1925	852,360	56,743
1926	714,072	44,395
1927	2,027,398	157,270
1928	1,982,994	147,298
1929	2,725,638	171,901

Grease and Oils, Sulphur Oil or Olive Foots

	Pounds.	Dollars.
1913	13,698,352	874,114
1914	11,714,795	772,055
1915	12,946,066	885,810
1916	12,684,936	1,055,292
1917	12,138,516	1,108,099
1918	1,712,640	175,814
1919	613,665	116,275
1920	10,409,509	1,603,499
1921	11,010,970	1,260,908
1922	16,034,592	1,080,947

Not stated after 1922.

Greases, Fats and Other Animal Oils Not Containing Alcohol

	Pounds.	Dollars.
1881	253,808	12,809
1891	2,611,262	108,422
1901	5,202,465	228,129
1913	7,334,605	291,934
1914	10,684,016	449,561
1915	17,300,356	709,330
1916	11,324,635	482,479
1917	8,428,689	482,066
1918	26,345,640	2,591,044
1919	27,684,496	2,585,209
1920	29,271,846	3,203,887
1921	20,411,764	1,407,092
1922	18,798,008	910,983
1923	1,578,478	86,180
1924	56,164	3,934
1925	238,007	20,994
1926	228,344	14,797
1927	156,211	11,674
1928	172,308	10,872
1929	284,579	20,779

Grease and Rendered Oil, N. E. S., Containing Alcohol

	Pounds.	Dollars.
1871	.....	38,420
1881	4,048,028	175,883
1891	4,563,255	93,874
1901	.....	.....
1913	.....	14,207
1914	.....	106,041
1915	.....	84,764
1916	.....	81,289
1917	.....	23,713
1918	.....	5,367
1919	333,704	40,349
1920	5,006	986
1921	31,867	2,750
1922	120,713	5,429
1923	2,634	778
1924	50	102
1925	.....	.....
1926	29	7
1927	.....	.....
1928	724	246
1929	.....	.....

Guano

	Tons.	Dollars
1871	94,345	3,313,914
1881	23,452	339,552
1891	11,162	194,167
1901	3,122	23,762
1913	16,462	313,891
1914	21,853	754,727
1915	20,950	534,371
1916	15,732	425,210
1917	3,563	73,394
1918	10,663	308,288
1919	8,218	293,425
1920	18,796	1,550,098
1921	37,578	3,158,064
1922	1,305	48,675
1923	22,883	912,240
1924	22,940	869,304
1925	24,553	737,896
1926	17,855	692,124
1927	20,579	834,447
1928	17,991	778,628
1929	39,968	1,964,465

Guiacol and Derivatives

	Pounds.	Dollars.
1914	1,637	2,645
1915	6,907	11,125
1916	469	1,160
1917	200	6,458
1918	9,492	74,818
1919	2,063	40,407
1920	2,870	18,479
1921	3,465	12,951
1922	3,203	8,249
1923	5,906	12,865
1924	2,285	5,678
1925	6,087	9,247
1926	2,193	4,683
1927	43,229	37,303
1928	5,055	6,879
1929	10,570	13,211

Gum, Amber and Amberoid, Crude

	Pounds.	Dollars.
1871	.....	180
1881	.....	32,400
1891	13,832	46,001
1901	16,947	119,405
1913	35,646	389,984
1914	22,485	117,375
1915	9,856	108,136
1916	443	3,599
1917	36	324
1918	734	1,280
1919	69	731
1920	3,406	12,036
1921	13,038	42,670
1922	4,164	24,789
1923	2,352	18,103
1924	2,246	25,134
1925	3,201	26,061
1926	3,173	35,786
1927	2,890	19,879
1928	1,808	12,646
1929	836	5,327

Gum, Arabic

	Pounds.	Dollars.
1871	12,317,518	1,700,249
1881	3,484,288	389,420
1891	986,760	124,235
1901	2,315,674	241,661
1912	6,586,737	568,631
1913	7,111,254	593,126
1914	2,727,447	182,370

Included in "Arabic or Senegal" after October 3, 1913.

Gum, Arabic or Senegal (Acacia)

	Pounds.	Dollars.
1914	3,492,682	240,066
1915	5,184,265	402,507
1916	7,617,494	679,928
1917	7,473,234	881,346
1918	6,033,341	1,242,281
1919	7,054,939	1,078,864
1920	6,926,635	881,780
1921	5,788,516	614,656
1922	8,894,748	718,553
1923	10,837,751	1,305,346
1924	6,627,003	759,653
1925	7,395,449	758,975
1926	8,532,260	901,092
1927	9,607,031	868,041
1928	9,612,838	787,447
1929	9,554,912	864,974

Gum, Asafetida

	Pounds.	Dollars.
1871	90,130	12,789
1881	135,175	12,318
1891	3,424	261
1901	180,998	25,598
1913	134,579	55,868
1914	106,338	27,193
1915	51,727	12,656
1916	115,856	30,126
1917	107,486	52,877
1918	57,398	44,741
1919	48,119	71,261
1920	96,380	211,734
1921	162,008	171,807
1922	5,548	1,405
1923	100,198	80,684
1924	26,494	7,137
1925	31,053	8,427
1926	69,548	14,236
1927	76,498	16,123
1928	112,110	22,713
1929	78,358	16,080

Gum, Benzoin, Gamboge and Mastic

	Pounds.	Dollars.
1901	23,207	6,418
1913	105,967	41,981
1914	41,975	17,386
1915	106,506	42,940
1916	219,266	73,843
1917	170,950	68,305
1918	136,120	70,501

Mastic shown separately after 1917; Benzoin and Gamboge after 1918.

Imports Into the United States

Gum, Benzoin

	Pounds.	Dollars.
1871	1,631	544
*1881	.....	.....
1891	42,144	16,712
1919	13,265	7,630
1920	18,948	8,068
1921	34,055	9,382
1922	15,323	7,032
1923	72,282	29,150
1924	29,270	15,596
1925	27,893	10,485
1926	58,691	15,625
1927	153,579	61,576
1928	90,172	44,787
1929	128,213	52,201

* See Copal, Kauri and Dammar.

Gum, Camphor, Crude, Natural

	Pounds.	Dollars.
1871	624,258	92,345
1881	2,035,165	350,503
1891	1,666,074	468,025
1901	2,175,874	738,929
1913	3,477,760	979,355
1914	3,476,908	929,725
1915	3,715,387	998,555
1916	4,674,530	1,268,233
1917	6,605,630	1,991,408
1918	3,638,884	1,451,050
1919	2,622,792	1,180,768
1920	3,961,252	5,496,098
1921	2,045,273	1,847,572
1922	1,667,278	1,057,243
1923	3,477,034	2,213,226
1924	2,137,560	1,309,702
1925	1,905,224	1,012,907
1926	2,616,263	1,503,015
1927	2,041,928	1,054,207
1928	2,839,292	1,124,567
1929	5,064,105	1,890,630

Gum, Camphor, Refined, Natural

	Pounds.	Dollars
1871	1,974	559
1881	134	36
1891	63	21
1901	77,813	39,507
1913	463,410	153,029
1914	624,508	201,992
1915	1,140,783	406,587
1916	2,304,197	754,498
1917	4,533,918	2,065,177
1918	1,145,244	800,318
1919	1,497,159	1,889,482
1920	1,367,263	2,843,755
1921	801,529	1,150,006
1922	1,596,757	1,195,809
1923	2,176,687	2,285,812
1924	2,659,071	1,874,509
1925	1,728,367	1,013,963
1926	1,193,641	778,471
1927	1,289,118	815,057
1928	1,211,291	612,192
1929	1,450,887	773,167

Gum, Camphor, Synthetic

	Pounds.	Dollars.
1915	16	3
1916	.....	.....
1917	460	174
1918	.....	.....
1919	.....	.....
1920	116,100	229,238
1921	123,686	23,060
1922	.....	.....
1923	293,933	182,494
1924	460,734	276,509
1925	1,347,208	682,329
1926	2,396,082	1,277,901
1927	2,739,027	1,337,850
1928	2,349,791	963,105
1929	3,160,119	1,105,412

Gum, Chicle

	Pounds.	Dollars.
1911	5,368,566	2,551,344
1912	5,266,285	2,433,924
1913	6,920,416	3,059,116
1914	7,998,187	2,902,454

Stated separately after 1914.

Gum, Chicle, Crude

	Pounds.	Dollars.
1901	1,756,057	380,410
1914	1,080,665	389,717
1915	2,465,400	839,312
1916	2,728,159	915,817
1917	4,435,149	1,467,917
1918	4,580,501	2,076,145
1919	6,583,276	3,669,679
1920	6,959,169	4,838,836
1921	6,808,317	4,391,872
1922	7,015,797	3,836,141
1923	7,451,716	4,017,354
1924	9,513,793	4,861,453
1925	9,440,701	5,760,671
1926	9,631,051	4,744,386
1927	7,985,369	4,130,436
1928	9,814,926	5,067,019
1929	9,409,814	4,793,948

Gum, Chicle, Refined

	Pounds.	Dollars.
1914	472,766	214,257
1915	1,934,760	962,889
1916	2,302,186	1,283,809
1917	3,935,093	2,371,834
1918	2,028,367	1,473,992
1919	529,166	564,270
1920	448,219	550,828
1921	162,895	249,973
1922	4,464	6,803
1923	15,615	16,933
1924	580	169
1925	140	79
1926	93	85
1927	.....	.....
1928	393	312
1929	.....	.....

Gum, Copal, Kauri and Dammar

	Pounds.	Dollars.
1871	1,466,750	186,903
*1881	15,140,050	2,343,736
1891	15,245,524	1,637,677
1901	18,325,248	1,944,056
1912	24,824,399	2,017,737
1913	31,513,330	2,828,840
1914	9,207,797	989,808

* 1881 includes Benzoin, Gamboge, Mastic and Shellac.

Stated separately after 1914.

Gum, Copal and Other Varnish Gums, N. E. S.

	Pounds.	Dollars.
1914	13,005,925	938,002
1915	12,528,887	813,985
1916	24,100,156	1,440,238
1917	25,621,685	1,583,070
1918	16,590,609	1,147,004
1919	18,921,007	4,001,022
1920	26,417,439	2,614,072
1921	32,188,183	4,145,167
1922	15,090,828	1,124,758
1923	32,133,896	2,267,282
1924	23,422,723	1,820,861
1925	22,025,959	1,705,808
1926	33,294,915	2,786,582
1927	37,631,207	2,968,214
1928	33,823,666	2,513,296
1929	37,125,694	2,953,212

Gum, Dammar

	Pounds.	Dollars.
1914	3,854,698	337,245
1915	5,388,644	563,056
1916	10,819,590	790,776
1917	9,200,064	797,115
1918	5,942,538	689,308
1919	4,270,960	528,458
1920	9,637,983	1,548,604
1921	5,710,548	1,249,864
1922	5,478,880	620,599
1923	12,479,672	1,687,050
1924	8,746,290	1,099,997
1925	12,103,826	1,416,907
1926	13,415,772	1,775,201
1927	15,196,318	2,254,891
1928	14,947,671	2,007,249
1929	18,699,148	2,366,124

Gum, Dextrin, Etc.

	Pounds.	Dollars.
1871	.....	10,072
1881	849,892	49,982
1891	6,228,352	212,968
1901	5,692,395	164,120
1913	5,096,891	180,296
1914	6,684,556	213,301

Not stated as such after 1914. See "Dextrin."

Gum, Dragon's Blood

	Pounds.	Dollars.
1871	.....	1,371
1881	.....	2,977
1891	2,088	541
1901	22,678	9,190
1913	14,553	5,916
1914	26,283	9,407
1915	23,110	8,446
1916	20,218	10,602
1917	48,026	19,137
1918	10,387	6,193
1919	24,064	10,121
1920	20,827	16,274
1921	90,508	11,754
1922	9,477	4,334
1923	43,916	14,211
1924	40,022	20,798
1925	48,077	28,070
1926	26,212	13,451
1927	75,314	34,500
1928	28,808	14,073
1929	39,792	17,188

Gum, Fir or Canada

	Pounds.	Dollars.
1871	.....	3,227
1881	.....	.....
1891	34,318	6,858

Not so stated after 1891; see "Balsam."

Gum, Gambier or Terra Japonica

	Pounds.	Dollars.
1871	11,165,119	252,593
1881	38,629,547	1,688,394
1891	27,610,924	1,343,604
1901	26,311,197	824,444
1913	17,087,805	784,931
1914	16,449,663	625,855
1915	14,169,250	542,200
1916	12,602,251	888,985
1917	10,861,904	853,675
1918	8,956,082	953,000
1919	5,909,382	654,211
1920	10,207,013	852,663
1921	6,292,780	432,258
1922	9,817,593	391,482
1923	7,727,170	459,982
1924	4,740,030	378,013
1925	5,146,377	657,358
1926	3,369,282	377,190
1927	3,892,265	312,737
1928	4,778,540	297,686
1929	3,855,414	241,602

Gum, Gamboge

	Pounds.	Dollars.
1919	18,153	23,452
1920	470,739	117,560
1921	3,025	3,798
1922	4,904	4,895

Not stated after 1922.

Gum, Karaya and Talha

	Pounds.	Dollars.
1924	1,124,324	86,338
1925	1,104,785	80,777
1926	1,899,899	184,035
1927	2,331,370	242,280
1928	3,488,113	319,136
1929	3,221,778	347,169

Gum, Kauri

	Pounds.	Dollars.
1914	6,554,887	1,097,989
1915	9,530,267	1,444,315
1916	9,958,953	1,894,527
1917	6,667,474	1,018,582
1918	5,867,216	1,029,036
1919	4,703,810	713,001
1920	8,424,661	1,152,075
1921	6,718,182	1,197,262
1922	6,622,811	1,223,442
1923	9,999,534	2,188,144
1924	7,712,927	1,518,668
1925	5,205,842	944,453
1926	4,574,920	832,011
1927	4,577,797	725,343
1928	4,461,920	595,331
1929	4,999,449	701,945

Gum, Lac, Crude, Seed, Button and Stick

	Pounds.	Dollars.
1871	73,758	10,647
1881	194,709	52,760
1891	795,757	127,547
1901	57,992	7,382
1913	293,010	36,832
1914	992,425	143,222
1915	1,126,167	88,293
1916	3,485,975	291,176
1917	5,473,174	637,846
1918	1,715,791	312,584
1919	833,784	183,220
1920	2,424,936	728,417
1921	1,806,726	646,407
1922	1,805,298	241,536
1923	6,581,125	1,471,459
1924	4,357,836	1,460,848
1925	9,596,083	3,584,986
1926	10,242,717	3,162,098
1927	15,183,906	4,055,389
1928	8,823,062	2,954,850
1929	11,365,906	3,892,519

Gum, Mastic

	Pounds.	Dollars.
1918	63,545	9,075
1919	10,281	4,232
1920	20,796	12,399
1921	10,954	5,391
1922	42,895	16,266
1923	32,011	11,819
1924	32,019	15,407
1925	28,591	13,860
1926	33,888	14,832
1927	47,235	22,243
1928	34,720	16,483
1929	68,750	34,354

Gum, Myrrh

	Pounds.	Dollars.
1924	33,128	6,673
1925	16,408	3,485
1926	30,898	9,830
1927	26,821	4,228
1928	93,506	17,093
1929	79,992	20,826

Gum, Rosin, Crude

	Pounds.	Dollars.
1913	299,983	12,605
1914	2,742,083	58,684
1915	1,505,790	42,085
1916	5,571,325	146,250
1917	129,848	3,380
1918	54,334	2,849
1919	251,353	11,064
1920	141,935	7,223
1921	1,903	126
1922	29,943	1,166
1923	494,430	20,455
1924	591,512	21,801
1925	841,068	33,361
1926	13,027,148	689,984
1927	9,376,568	176,842
1928	1,040,699	40,417
1929	1,691,406	72,636

Gum, Sandarac

	Pounds.	Dollars.
1924	147,230	29,151
1925	92,310	28,354
1926	148,214	46,554
1927	183,797	38,538
1928	98,357	20,532
1929	113,882	44,034

Gum, Senegal

	Pounds.	Dollars.
1901	1,107,763	130,959
1913	172,528	16,254
*1914	140,097	10,609

*Included in "Arabic or Senegal" after October 3, 1913.

Gum, Shellac

	Pounds.	Dollars.
1871	423,537	70,757
*1881	.....	.....
1891	6,290,225	1,078,584
1901	9,617,593	1,278,297
1913	22,069,610	3,046,750
1914	16,824,130	2,686,480
1915	24,308,145	3,018,296
1916	25,927,553	3,301,378
1917	32,847,434	7,709,228
1918	22,841,360	9,514,651
1919	14,268,653	6,462,754
1920	34,151,209	22,178,484
1921	23,871,866	16,634,073
1922	30,767,666	15,656,900
1923	32,775,176	20,084,540
1924	28,511,576	15,170,791
1925	21,436,333	11,433,671
1926	26,187,531	11,493,573
1927	28,706,699	8,846,496
1928	23,012,490	10,365,553
1929	31,548,391	12,487,214

* See Copal, Kauri and Dammar.

Gum, Spruce

	Pounds.	Dollars.
1918	274	294
1919	509	438
1920	789	752
1921	1,397	2,519
1922	2,664	4,059
1923	58	77
1924	3,581	646
1925	9,202	4,140
1926	1,971	1,478
1927	2,510	1,007
1928	4,416	1,857
1929	10,303	2,696

Gum, Tragacanth

	Pounds.	Dollars.
1881	315,918	127,312
1891	717,404	211,183
1901	1,071,367	365,737
1913	1,401,721	463,800
1914	1,301,545	460,364
1915	1,025,081	355,119
1916	1,129,704	590,128
1917	473,556	320,751
1918	525,445	279,284
1919	785,725	909,652
1920	1,519,386	1,788,079
1921	324,619	484,605
1922	665,817	398,786
1923	1,202,962	586,607
1924	947,985	354,257
1925	696,856	261,922
1926	1,422,859	720,104
1927	1 459,300	740,541
1928	1,769,514	940,705
1929	1,588,016	757,414

Gum, Tragasol

	Pounds.	Dollars.
1913	1,028,804	23,998
1914	913,077	20,310
1915	761,390	16,295
1916	931,503	21,587
1917	882,914	21,663
1918	503,045	22,237
1919	662,762	40,006
1920	567,550	27,406
1921	606,184	21,766
1922	734,295	26,720
1923	1,095,765	43,705
1924	798,477	38,499
1925	1,207,853	47,880
1926	975,356	49,284
1927	1,235,474	47,040
1928	1,443,065	68,026
1929	2,758,849	123,743

Gums and Resins, in a Crude State, Not Elsewhere Shown

	Pounds.	Dollars.
1881	.....	244,577
1891	.....	1,621,530
1901	.....	87,537
1913	2,704,615	216,886
1914	3,733,839	239,824
1915	4,088,233	255,469
1916	4,963,037	258,837
1917	3,126,764	248,700
1918	5,273,222	625,960
1919	3,232,094	630,683
1920	6,866,439	1,093,332
1921	6,183,215	670,635
1922	7,505,216	532,226
1923	6,751,977	868,575
1924	4,853,982	496,519
1925	5,878,775	633,130
1926	7,611,090	777,545
1927	4,916,059	616,372
1928	3,846,431	649,273
1929	5,148,993	816,053

Hellebore

	Pounds.	Dollars.
1924	152,925	9,889
1925	30,776	1,336
1926	29,929	1,361
1927	73,177	3,119
1928	696,467	54,033
1929	148,980	5,345

Hemlock Bark Extract for Tanning,

	Pounds.	Dollars.
1871	.....	3,256
1881	.....	4,021
1891	768,710	14,958
*1901	3,424,390	101,840
1915	5,263,296	173,998
1916	5,577,989	390,287
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	117,113	4,712
1922	320,503	12,194
1923	79,145	2,887
1924	.....	.....
1925	.....	.....
1926	100	23
1927	.....	.....
1928	30	4
1929	.....	.....

*1901 includes "Quebracho extract."

Henbane

	Pounds.	Dollars.
1924	77,922	13,272
1925	72,746	11,123
1926	101,006	12,164
1927	114,881	10,744
1928	128,923	16,100
1929	70,987	7,473

Hexamethylenetetramine

	Pounds.	Dollars.
1925	10,549	7,036
1926	21,763	9,261
1927	14,661	6,557
1928	7,764	2,827
1929	7,113	2,388

Hoarhound

	Pounds.	Dollars.
1924	94,886	5,508
1925	34,290	1,972
1926	58,069	3,233
1927	78,477	3,894
1928	82,013	3,670
1929	97,276	5,092

Honey

	*Pounds.	Dollars
1871	85,358	53,120
1881	51,158	29,542
1891	21,392	9,570
1901	129,136	58,688
1913	113,792	64,718
1914	49,163	30,291
1915	268,912	107,172
1916	124,268	55,592
1917	277,345	171,616
1918	159,339	213,006
1919	99,657	151,102
1920	764,244	1,019,250
1921	388,262	469,037
1922	187,441	107,740
1923	70,235	61,547
1924	272,389	31,042
1925	263,845	32,073
1926	166,260	33,529
1927	169,452	34,361
1928	112,217	23,467
1929	92,656	22,936

* Quantity stated in gallons prior to 1924.

Hoofs, Horns, Horn Strips, and Tips

	Pounds.	Dollars.
1871	.....	15,264
1881	.....	398,211
1891	.....	587,643
1901	.....	311,924
1913	.....	320,192
1914	.....	254,872
1915	.....	156,126
1916	.....	110,169
1917	.....	171,718
1918	.....	357,399
1919	1,928,384	106,179
1920	4,894,749	292,353
1921	9,424,775	412,931
1922	2,158,131	140,782
1923	4,373,049	334,903
1924	3,087,550	241,161
1925	1,368,649	141,761
1926	1,120,177	98,697
1927	619,209	74,593
1928	1,077,754	64,215
1929	1,599,371	85,229

Hop Extract and Lupulin

		Dollars.
1901	.....	2,893
1913	.....	34,338
1914	.....	49,451
1915	.....	24,407
1916	.....	3,805
1917	.....	1,759
1918	.....	174
1919	.....	19
1920	.....	20,503
1921	.....	17,690
1922	.....	6,892
1923	.....	4,922

"Hop Extract" not stated after 1923. See "Lupulin."

Hops

	Pounds.	Dollars.
1871	100,884	12,811
1881	475,428	111,906
1891	3,789,264	1,706,824
1901	2,489,069	827,943
1913	8,471,776	2,843,299
1914	5,360,748	2,775,882
1915	11,710,534	2,738,644
1916	664,284	147,688
1917	212,029	54,701
1918	112,811	61,201
1919	6	14
1920	1,866,641	1,078,558
1921	3,714,536	2,073,574
1922	822,291	343,658
1923	1,266,303	254,862
1924	558,698	183,794
1925	435,129	139,597
1926	449,027	256,492
1927	427,040	280,443
1928	652,848	290,983
1929	638,669	197,752

Hydrogen Peroxide or Dioxide

	Pounds.	Dollars.
1927	748,184	130,070
1928	75,296	13,620
1929	3,089	697

Hyoscyamine and Its Salts

	Ounces.	Dollars.
1924	28	456
1925	.....	.....

Not stated after 1925.

Imports Into the United States

Ichthyol

	Pounds.	Dollars.
1901	23,619	33,421
1913	44,347	61,796
1914	66,957	92,485
1915	5x,847	70,664
1916	6x,227	59,470
1917	91,884	60,757
1918	65,962	43,541
1919	19,623	9,830
1920	98,870	91,927
1921	54,309	31,616
1922	107,119	140,314
1923	17,763	20,407
1924	20	15
1925	9,520	17,157
1926	21,866	25,464
1927	37,609	51,062
1928	40,096	50,015
1929	42,878	58,315

Incense

	Pounds.	Dollars.
1901	.....	702
1913	.....	14,637
1914	.....	24,382
1915	.....	4,328
1916	.....	5,431
1917	.....	9,968
1918	.....	12,951
1919	.....	32,446
1920	.....	84,877
1921	.....	102,850
1922	.....	62,040
1923	.....	80,139
1924	262,589	100,636
1925	318,040	199,953
1926	247,017	88,015
1927	273,783	72,840
1928	214,339	70,654
1929	413,847	125,290

India Rubber and Substitutes for, Crude—Balata

	Pounds.	Dollars.
1901	7,635	1,987
1913	1,318,598	766,772
1914	1,525,351	789,201
1915	2,473,228	963,384
1916	2,549,303	997,827
1917	3,284,533	1,647,906
1918	2,468,403	1,285,869
1919	1,238,852	593,633
1920	2,013,737	1,278,551
1920	1,979,990	1,043,567
1922	1,867,477	1,063,056
1923	1,755,857	979,860
1924	1,334,510	731,691
1925	873,078	446,629
1926	1,195,374	579,412
1927	1,039,976	404,496
1928	1,192,055	412,167
1929	2,241,933	646,732

India Rubber and Substitutes for, Crude—Guayule

	Pounds.	Dollars.
1913	10,504,945	4,354,400
1914	1,475,804	607,076
1915	5,116,165	1,442,464
1916	2,826,960	881,023
1917	2,872,372	764,484
1918	3,242,340	1,037,030
1919	2,990,253	761,060
1920	1,314,913	278,175
1920	995,123	197,058
1922	285,200	57,040
1923	1,065,459	226,048
1924	2,784,864	740,029
1925	5,148,058	920,391
1926	10,670,951	2,756,136
1927	9,652,227	2,347,169
1928	12,129,723	2,984,535
1929	1,219,767	258,807

India Rubber and Substitutes for, Crude—Jelutong, or Pontianak

	Pounds.	Dollars.
1901	9,435,740	257,322
1913	45,444,282	2,197,948
1914	24,224,955	1,175,335
1915	14,765,765	704,613
1916	28,381,105	1,347,176
1917	23,738,004	1,058,577
1918	16,109,009	969,144
1919	11,363,283	1,199,216
1920	18,402,162	2,432,883
1921	6,774,189	1,075,771
1922	5,782,265	453,245
1923	8,712,813	702,485
1924	11,076,841	1,015,531
1925	14,394,748	1,380,198
1926	15,141,782	2,331,553
1927	16,792,248	2,925,063
1928	16,431,376	2,322,055
1929	19,146,623	2,641,584

India Rubber, Milk of, or Latex

	Pounds.	Dollars
1925	6,887,869	1,647,611
1926	9,400,462	6,130,366
1927	3,538,312	1,465,663
1928	5,185,221	1,728,377
1929	10,047,876	2,050,219

Indigo, Carmined

	Pounds.	Dollars.
1881	.....	329
1891	28,175	33,145
1901	11,061	9,789
1912	9,047	5,903
1913	16,329	9,986
1914	2,130	1,333

Not stated after October 3, 1913.

Indigo, Crude, Natural or Synthetic

	Pounds.	Dollars.
1913	7,712,488	1,102,893
1914	8,252,528	1,115,128
1915	7,983,112	1 604,767
1916	6,794,518	8,451,501
1917	*545,106	960,068

* Figures cover period July 1 to September 8, 1916; stated separately afterwar'

Indigo, Natural

	Pounds.	Dollars.
1871	2,101,867	2,115,914
1881	1,699,754	1,541,664
1891	3,999,644	1,892,299
1901	3,139,063	1,402,894
1917	1,281,996	2,449,361
1918	2,141,382	3,261,978
1919	794,251	961,610
1920	154,843	206,119
1921	61,967	121,320
1922	36,007	76,176
1923	10,527	11,709
1924	10,244	4,715
1925	4,677	4,830
1926	.....	.....
1927	2,148	1,373
1928	4,970	1,854
1929	1,528	185

Indigo, Synthetic

	Pounds.	Dollars.
1917	886,700	559,156
1918	942,946	553,246
1919	358,867	197,176
1920	520,347	351,440
1921	99,809	107,084
1922	101,683	157,925
1923	27,750	35,200
1924	356	117
1925	2,116	948
1926	1,589	280
1927	590	610
1928	.....	.....
1929	.....	.....

Indigo Colors, Dyes, Stains, Etc.

	Pounds.	Dollars.
1924	4,988	6,228
1925	4,777	4,296
1926	14,423	22,599
1927	8,220	9,766
1928	.....	.....
1929	62	228

Indigo Dyes

		Dollars.
1914	.....	34,342
1915	.....	76,258
1916	.....	155,254
1917	.....	147,744

Stated as "Indigoids, etc." after 1917.

Indigo Extracts or Pastes

	Pounds.	Dollars.
1871	.....	40,423
1881	1,540,185	141,163
1891	881,969	58,289
1901	181,168	12,292
1912	223,687	45,984
1913	242,998	43,417
1914	11,998	2,540

Not stated after October 3, 1913.

Indigoids Obtained from Indigo or Otherwise

	Pounds.	Dollars.
1918	13,037	40,984
1919	4,236	9,378
1920	70,461	177,736
1921	67,269	110,596
1922	187,156	228,822
1923	64,399	111,270

Stated as "Indigo colors, dyes, etc.," after 1923.

Ink Powder (Coaltar Product)

	Pounds.	Dollars.
1924	98	72
1925	.....	.....
1926	100	172
1927	30	8
1928	.....	.....
1929	.....	.....

Ink, Printing and Lithographic

	Pounds.	Dollars.
1901	.....	13,392
1913	.....	7,820
1914	.....	24,999
1915	.....	15,022
1916	.....	17,884
1917	.....	19,026
1918	.....	4,685
1919	.....	655
1920	.....	7,214
1921	.....	12,319
1922	.....	4,997
1923	.....	14,403
1924	13,463	6,960
1925	96,291	21,656
1926	37,282	12,001
1927	61,410	16,273
1928	85,206	19,169
1929	716,259	82,342

Ink, Writing and Copying

	Pounds.	Dollars.
1913	.....	28,518
1914	.....	18,941
1915	.....	22,765
1916	.....	21,931
1917	.....	26,400
1918	.....	11,962
1919	.....	15,615
1920	.....	14,846
1921	.....	10,584
1922	.....	7,424
1923	.....	6,087
1924	35,139	7,634
1925	19,547	3,457
1926	31,435	6,063
1927	24,121	5,347
1928	31,558	9,694
1929	43,627	8,207

Ink, All Other, Including Ink Powders (Except Coaltar)

	Pounds.	Dollars.
1871	.....	85,823
1881	.....	151,358
1891	.....	116,354
1901	.....	61,653
1913	.....	4,918
1914	.....	6,931
1915	.....	6,196
1916	.....	5,481
1917	.....	5,095
1918	.....	8,529
1919	.....	7,129
1920	.....	8,460
1921	.....	14,875
1922	.....	7,226
1923	.....	11,934
1924	77,930	22,431
1926	94,860	174,102
1926	72,650	19,118
1927	56,853	17,193
1928	58,359	19,872
1929	408,818	56,424

Iodine, Crude

	Pounds.	Dollars.
1871	74,320	212,195
1881	162,863	336,998
1891	241,186	382,009
1901	262,052	658,492
1913	351,256	730,734
1914	230,391	533,447
1915	631,510	1,284,395
1916	1,044,525	2,447,764
1917	1,726,903	4,381,317
1918	253,231	536,799
1919	1,212,290	2,443,569
1920	520,443	927,269
1921	592,758	1,291,669
1922	384,141	988,953
1923	342,206	1,067,491
1924	55,974	137,806
1925	.....	.....
1926	651,097	2,236,937
1927	766,560	2,240,291
1928	827,478	2,799,848
1929	700,175	2,428,974

Iodine, Resublimed

	Pounds.	Dollars.
1871	956	3,499
1881	13	30
1891	35	106
1901	22	21
1913	40	96
1914	57	205
1915	3	7
1916	.....	.....
1917	2,610	9,088
1918	15,450	41,733
1919	6,525	22,657
1920	2,870	10,160
1921	2,300	8,051
1922	1,500	4,730
1923	24	45
1924	.....	.....
1925	.....	.....
1926	1	6
1927	.....	.....
1928	.....	.....
1929	3	15

Iodoform

	Pounds.	Dollars.
1901	21	93
1913	16	57
1914	86½	301
1915	10	40
1916	.....	.....
1917	.....	.....
1918	1	4
1919	.....	.....
1920	.....	.....
1921	7	27
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....

Not stated after 1925.

Ipecac, Crude

	Pounds.	Dollars.
1871	22,460	25,232
1881	39,385	41,372
1891	30,484	50,505
1901	52,143	112,465
1913	54,648	86,113
1914	78,654	110,316
1915	137,927	248,408
1916	203,734	484,828
1917	84,672	146,505
1918	60,972	122,581
1919	171,944	378,542
1920	94,429	211,631
1921	83,316	186,998
1922	40,854	44,377
1923	65,875	81,625
1924	78,200	106,117
1025	75,145	113,440
1926	43,238	103,374
1927	99,408	295,572
1928	65,640	180,547
1929	66,134	159,007

Iridium

	Ounces, troy.	Dollars.
1881	.....	1,730
1891	.....	333
1901	.....	6,072
1913	5,341	348,333
1914	2,185	154,842
1915	3,801	220,823
1916	2,496	146,055
1917	3,899	355,206
1918	2,815	307,954
1919	3,678	503,047
1920	4,969	846,462
1921	3,282	641,349
1922	789	74,188
1923	1,812	336,843
1924	1,685	282,863
1925	1,517	255,710
1926	2,868	609,199
1927	4,875	563,217
1928	3,411	440,363
1929	5,665	1,025,893

Iron Alum

	Pounds.	Dollars.
1927	661	65
1928	.....	.....
1929	.....	.....

Iron Sulphide

	Pounds.	Dollars.
1924	2,618	457
1925	16,412	926
1926	23,567	1,566
1927	17,842	602
1928	8,449	206
1929	33,170	1,143

Isinglass and Prepared Fish Sounds

	Pounds.	Dollars.
1871	.....	6,449
1881	836,801	245,239
1891	18,222	17,976
1901	5,608	12,341
1913	225,165	72,540
1914	146,364	56,433
1915	11,906	9,008
1916	13,750	14,498
1917	35,723	35,476
1918	31,490	23,339
1919	16,764	11,806
1920	26,844	29,341
1921	20,972	15,515
1922	15,278	12,416
1923	79,638	76,261

See "Casein Glue, Isinglass and Other Fish Sounds, Prepared," after 1923.

Jaborandi

	Pounds.	Dollars.
1924	7,354	617
1925	.....	.....
1926	.....	.....
1927	2,956	247
1928	2,631	237
1929	3,384	214

Jalap, Crude

	Pounds.	Dollars.
1871	46,135	29,688
1881	76,986	12,256
1891	92,107	24,141
1901	165,350	15,593
1913	227,275	44,632
1914	208,901	23,942
1915	176,047	18,485
1916	201,383	13,642
1917	168,639	14,315
1918	126,511	24,238
1919	95,103	40,667
1920	193,813	104,902
1921	62,148	22,290
1922	60,474	7,207
1923	131,727	28,876
1924	127,665	37,290
1925	122,851	34,476
1926	101,422	24,236
1927	167,883	30,478
1928	85,795	18,919
1929	71,475	15,794

Joss Sticks, or Joss Light

	.....	Dollars.
1891	.....	1,307
1901	.....	9,706
1913	.....	13,851
1914	.....	6,388
1915	.....	21,720
1916	.....	36,968
1917	.....	36,115
1918	.....	30,660
1919	.....	26,996
1920	.....	36,137
1921	.....	25,056
1922	.....	46,986
1923	.....	39,782
1924	.....	31,517
1925	.....	32,620
1926	.....	25,264
1927	.....	22,713
1928	.....	27,476
1929	.....	21,321

Kainit

	Tons.	Dollars.
1891	85,877	605,309
1901	187,470	1,235,124
1913	366,184	2,149,689
1914	526,112	2,579,619
1915	79,124	444,996
1916	64	1,795
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	272,048	5,599,980
1921	204,834	4,782,974
1922	83,571	585,338
1923	173,353	1,133,576
1924	181,287	1,080,132
1925	144,642	865,201
1926	190,955	1,252,942
1927	147,203	1,058,858
1928	107,835	881,688
1929	82,802	680,667

Kelp

	Pounds.	Dollars.
1901	.....	13
1913	.....	4
1914	.....	350
1915	.....	.....
1916	.....	67
1917	.....	50
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	36
1922	.....	.....
1923	2,500	275
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	4,625	617
1929	.....	.....

Kieserite

	Pounds.	Dollars.
1924	3,369,034	12,387
1925	1,336,679	4,562
1926	201,027	1,039
1927	1,000,945	4,610
1928	50,000	362
1929	.....	.....

Lac Dye

	Pounds.	Dollars.
1871	128,938	21,069
1881	194,623	39,064
1891	.....	.....
1901	4,922	671
1913	.....	.....
1914	.....	.....
1915	.....	.....
1916	89,600	13,804
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	398,028	54,849
1921	680	135
1922	.....	.....

Not stated after 1922.

Lactarene

(See Casein)

Lakes From Coal Tar

	Pounds.	Dollars.
1926	800	811
1927	500	835
1928	155	169
1929	.....	.....

Lakes, Dry or in Pulp, Not Specially Provided For

	Pounds.	Dollars.
1914	.....	59,603
1915	.....	153,430
1916	.....	29,839
1917	.....	11,230
1918	.....	8,301
1919	600	1,307
1920	8,901	7,870
1921	9,798	6,533
1922	169,895	9,234
1923	6,091	7,322
1924	3,016	2,833
1925	263	760

Not stated after 1925.

Lamp Black

	Pounds.	Dollars.
1924	751,396	59,436
1925	836,629	54,984
1926	1,120,160	74,627
1927	412,304	26,796
1928	486,296	32,450
1929	381,974	21,922

Lard

	Pounds.	Dollars.
1871	9,565	1,478
1881	1,655	225
1891	1,795	187
1901	3,084	290
1913	4,117	496
1914	1,251	169
1924	11,406	1,707
1925	41,433	6,198
1926	3,519	591
*1927	84,197	9,401
1928	4,970	827
1929	2,512	452

Included in next class 1915 to 1923 incl.

* Including 79,361 pounds ($8,600) from the Philippines.

Lard Compounds and Lard Substitutes

	Pounds.	Dollars.
1914	124,385	13,665
1915	729,792	79,032
1916	2,405	289
1917	66,682	7,522
1918	1,131,998	266,806
1919	3,191,726	870,361
1920	746,073	192,918
1921	4,988	1,146
1922	3,263	497
1923	3,445	912
1924	5,221	837
1925	104,642	13,364
1926	5,516	887
*1927	371,837	43,581
1928	231,421	20,032
1929	307,281	30,869

* Including 367,945 pounds ($42,965) from the Philippines.

Imports Into the United States

Lavender Flowers

	Pounds.	Dollars.
1924	52,090	16,556
1925	21,003	4,622
1926	32,161	7,236
1927	52,462	13,933
1928	48,501	12,744
1929	52,144	13,197

Lead Acetate, Brown, Gray or Yellow

	Pounds.	Dollars.
1871	1,827	196
1891	.....	.....
1901	11	4
1913	42	8
1914	17,477	957
1915	.....	.....
1916	124	17
1917	225	97
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	3,854	306
1922	5,123	346
1923	11,023	768
1924	44,299	3,456
1925	11,038	896
1926	11,365	863
1927	16,928	1,340
1928	10,097	821
1929	17,928	1,513

Lead Acetate, White

	Pounds.	Dollars.
1881	34	6
1891	13,279	707
1901	1,500	99
1913	21,599	1,177
1914	110,936	10,768
1915	31,096	1,809
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	220	212
1920	14	7
1921	6,361	549
1922	83,712	6,378
1923	70,297	5,010
1924	153,307	12,798
1925	163,142	15,995
1926	163,707	14,983
1927	303,687	29,390
1928	119,706	9,177
1929	248,996	19,799

Lead Arsenate

	Pounds.	Dollars.
1924	3,611	534
1925	310	26
1926	10,157	1,488
1927	.....	.....
1928	.....	.....
1929	200	26

Lead Nitrate

	Pounds.	Dollars.
1871	513,280	35,358
1881	179,261	10,651
1891	639	46
1901	24,260	1,231
1913	11,305	605
1914	11,312	712
1915	.....	.....
1916	2,205	280
1917	224	22
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	7,746	530
1923	89,073	4,614
1924	11,334	914
1925	28,532	2,440
1926	41,489	3,481
1927	92,220	9,607
1928	52,101	4,828
1929	64,353	4,694

Lead Compounds, Not Elsewhere Specified

	Pounds.	Dollars.
1914	102,899	9,348
1915	86,514	7,471
1916	39,823	3,644
1917	32,887	3,069
1918	4,510	242
1919	2,408	321
1920	5,591	958
1921	13,224	2,102
1922	3,481	683
1923	14,013	1,951
1924	26,978	3,412
1925	25,489	2,826
1926	19,907	2,998
1927	70,274	9,612
1928	12,907	1,932
1929	45,704	7,641

Lead Pigments, N. E. S.

	Pounds.	Dollars.
1921	35,227	2,869
1922	1,489	467
1923	14,050	1,099
1924	27,615	3,883
1925	1,458	312
1926	23,719	3,460
1927	30,826	2,155
1928	32,025	2,449
1929	51,176	3,469

Lead, Pigs and Bars, Old Refuse Run Into Bars, Etc.

	Pounds.	Dollars.
1871	91,496,716	3,721,096
1881	4,322,068	159,129
1891	19,772,642	615,716
1901	.....	.....
1913	6,905,760	147,838
1914	1,309,204	36,307
1915	951,999	31,385
1916	1,794,889	90,815
1917	6,369,189	323,961
1918	345,861	16,155
1919	2,313,652	103,837
1920	15,242,621	735,608
1921	112,785,058	5,145,452
1922	13,085,648	386,894
1923	64,012,593	2,443,146
1924	27,951,572	1,895,642
1925	13,355,676	802,771

Not stated after 1925.

Lead Pigs and Bars

	Pounds.	Dollars.
1926	14,858,383	1,063,331
1927	23,218,768	1,659,590
1928	8,018,734	344,353
1929	25,141,672	1,115,865

Lead Resinate

	Pounds.	Dollars.
1925	220	25
1926	.....	.....
1927	840	192
1928	1,323	303
1929	.....	.....

Lead, Sublimed, Basic Sulphate

	Pounds.	Dollars.
1926	266	30
1927	11,000	563
1928	.....	.....
1929	.....	.....

Leeches

	Number.	Dollars.
1891	.....	3,647
1901	.....	2,464
1913	.....	5,587
1914	.....	7,376
1915	.....	1,334
1916	.....	2,810
1917	.....	16,899
1918	.....	9,035
1919	.....	5,818
1920	.....	14,130
1921	.....	11,100
1922	.....	7,692
1923	.....	7,704
1924	247,827	6,528
1925	464,370	5,386
1926	396,078	4,419
1927	364,000	5,400
1928	332,320	4,415
1929	318,808	4,059

Lemon, Lime and Sour Orange Juice

	*Gallons.	Dollars.
1871	.....	7,058
1881	.....	63,920
1891	.....	140,673
1901	.....	122,469
1913	.....	116,370
1914	.....	110,860
1915	.....	139,605
1916	.....	152,575
1917	.....	180,088
1918	.....	114,404
1919	1,933,465	277,031
1920	3,254,653	515,004
1921	1,009,320	165,827
1922	1,083,583	169,216
1923	1,534,682	176,662
1924	4,305,887	511,999
1925	3,668,362	533,479
1926	2,612,659	502,972
1927	445,296	450,957
1928	300,912	316,345
1929	223,127	214,142

* Quantity stated in pounds prior to 1927.

Licorice Extract in Paste, Rolls or Other Forms

	Pounds.	Dollars.
1871	2,665,536	310,901
1881	872,900	111,072
1891	1,190,524	150,090
1901	878,634	96,404
1913	832,277	106,288
1914	946,016	122,210
1915	1,080,718	152,756
1916	1,702,927	230,129
1917	1,156,300	253,671
1918	734,976	229,812
1919	413,648	213,028
1920	1,116,621	773,970
1921	1,653,809	519,884
1922	1,444,253	333,434
1923	1,570,930	400,364
1924	1,002,100	198,465
1925	1,886,859	291,791
1926	1,396,076	260,478
1927	960,508	207,739
1928	827,570	164,291
1929	913,784	173,771

Licorice Root

	Pounds.	Dollars.
1871	3,199,958	80,366
1881	29,927,501	575,720
1891	55,093,585	897,186
1901	96,118,444	1,737,709
1913	105,032,429	1,806,756
1914	86,754,245	1,526,057
1915	82,289,410	1,557,443
1916	52,784,042	1,792,578
1917	59,398,644	2,189,441
1918	27,051,021	1,863,886
1919	42,644,661	3,426,007
1920	47,582,849	2,983,716
1921	59,963,805	3,755,726
1922	52,437,947	2,157,916
1923	47,531,247	1,735,876
1924	86,867,065	2,891,142
1925	51,927,467	1,365,195
1926	57,548,736	1,562,846
1927	58,007,964	1,630,923
1928	74,642,197	2,169,944
1929	66,168,633	1,766,447

Lime N. E. S.

	*Pounds.	Dollars.
1871	.....	11,315
1881	.....	24,968
1891	329,580	67,700
1901	477,755	65,413
1913	77,319	42,839
1914	65,036	42,926
1915	66,634	29,518
1916	92,321	42,537
1917	160,776	74,437
1918	147,080	77,733
1919	167,152	103,749
1920	278,046	219,986
1921	361,553	357,992
1922	224,189	241,580
1923	266,747	352,651
1924	488,845	411,550
1925	25,128,561	249,369
1926	27,206,642	264,408
1927	29,258,180	283,439
1928	24,636,817	230,922
1929	20,146,677	301,218

* Stated in "100 pounds" prior to 1925.
Includes "Hydrated" prior to 1924.

Lime, Chlorinated, or Bleaching Powder

	Pounds.	Dollars.
1871	32,111,839	635,910
1881	74,624,420	820,073
1891	111,156,006	1,431,470
1901	110,962,467	1,372,829
1913	76,092,327	619,492
1914	48,497,239	416,893
1915	18,402,130	197,975
1916	3,289,790	80,418
1917	65,564	3,888
1918	535	83
1919	539,596	11,363
1920	830,007	13,611
1921	4,584,344	144,029
1922	17,374,617	267,065
1923	1,759,457	61,943
1924	10,837,833	48,789
1925	1,776,305	58,742
1926	3,011,028	77,700
1927	3,251,882	80,317
1928	1,987,523	76,317
1929	.....	.....

Lime Citrate

	Pounds.	Dollars.
1891	28,358	4,337
1901	2,416,088	299,583
1913	5,526,954	756,309
1914	3,119,924	496,517
1915	6,242,244	1,102,629
1916	8,127,364	1,763,652
1917	6,361,458	1,554,577
1918	4,013,606	814,073
1919	2,773,095	1,136,057
1920	10,929,314	2,908,023
1921	5,060,407	1,104,576
1922	8,983,134	1,194,964
1923	7,572,925	1,103,584
1924	2,951,386	328,648
1925	1,984,741	211,289
1926	3,469,202	395,777
1927	1,755,948	190,202
1928	194,528	21,773
1929	3,138,451	78,208

Lime, Hydrated

	Pounds.	Dollars.
1924	6,115,000	56,712
1925	3,535,460	29,189
1926	5,918,324	48,595
1927	9,910,581	80,272
1928	9,889,118	78,031
1929	14,248,137	109,824

Limestone Ground and Pulverized, for Agricultural Purposes

	Tons.	Dollars.
1929	4,991	59,622

Litharge

	Pounds.	Dollars.
1871	70,889	3,870
1881	63,058	2,568
1891	87,970	4,334
1901	23,898	1,057
1913	34,022	1,649
1914	43,156	2,355
1915	14,779	774
1916	20,160	1,417
1917	220	42
1918	100	12
1919	.....	.....
1920	2	1
1921	21,100	2,653
1922	1,770	162
1923	21,405	1,250
1924	1,220	74
1925	4,040	496
1926	232	30
1927	402	54
1928	880	87
1929	2,250	163

Lithopone and Other Combinations of Zinc Sulphide and Barium Sulphate

	Pounds.	Dollars.
1914	7,245,151	218,133
1915	6,185,345	195,828
1916	5,122,083	414,573
1917	231,869	20,591
1918	448,000	29,199
1919	233,338	17,678
1920	2,284,955	170,522
1921	3,270,179	249,014
1922	20,482,320	822,045
1923	20,632,881	821,518
1924	19,099,722	739,452
1925	13,396,004	500,241
1926	15,069,761	537,802
1927	16,533,451	645,259
1928	17,181,842	717,342
1929	20,163,773	848,847

Litmus

	Pounds.	Dollars.
1881	.....	229
1891	.....	113
1901	.....	84
1913	.....	216
1914	.....	263
1915	.....	59
1916	.....	280
1917	.....	648
1918	.....	44
1919	5,016	4,177
1920	2,054	1,585
1921	5,303	3,419
1922	2,396	1,756

Included in "Cudbear, etc.," after 1922.

Logwood

	Tons.	Dollars.
1881	72,018	1,362,983
1891	84,381	1,842,964
1901	54,480	857,991
1913	36,952	475,484
1914	30,172	379,754
1915	54,704	722,410
1916	134,819	3,437,388
1917	121,762	4,127,031
1918	55,354	1,175,049
1919	20,871	412,952
1920	45,073	1,144,455
1921	56,977	1,697,436
1922	31,418	644,813
1923	27,653	426,878
1924	31,330	590,285
1925	22,545	394,013
1926	21,387	422,541
1927	26,627	516,765
1928	35,035	614,750
1929	25,912	466,509

Logwood Extract

	Pounds.	Dollars.
1871	.....	12,537
1881	6,091,388	454,984
1891	3,282,227	376,808
1901	2,864,874	191,852
1913	2,258,206	111,575
1914	1,228,178	77,119
1915	2,061,368	144,207
1916	2,652,787	316,872
1917	1,147,448	164,711
1918	215,954	24,698
1919	265,774	51,041
1920	868,297	70,910
1921	116,185	25,500
1922	1,317,604	78,601
1923	1,928,359	97,086
1924	1,693,963	119,156
1925	2,264,162	177,038
1926	2,756,576	204,734
1927	364,495	41,964
1928	126,861	23,089
1929	135,675	22,178

Lupulin

	Pounds.	Dollars.
1924	7,589	12,357
1925	10,741	18,229
1926	14,479	41,735
1927	14,292	44,139
1928	30,606	51,325
1929	29,502	88,174

Lycopodium

	Pounds.	Dollars.
1924	18,267	4,971
1925	4,928	2,515
1926	35,606	24,908
1927	47,000	83,084
1928	29,445	18,186
1929	47,280	29,452

Mace, Unground

	Pounds.	Dollars.
1871	69,370	41,571
1881	86,914	30,111
1891	186,801	85,978
1901	321,146	78,785
1913	611,005	244,177
1914	287,976	112,178
1915	342,618	124,128
1916	426,096	130,796
1917	436,346	145,126
1918	371,746	118,168
1919	321,339	107,739
1920	552,040	184,357
1921	581,408	150,651
1922	734,025	131,543
1923	927,276	247,258
1924	761,825	297,995
1925	613,694	300,949
1926	690,075	440,411
1927	871,393	611,665
1928	677,097	501,772
1929	561,116	349,611

Mace, Ground

	Pounds.	Dollars.
1928	560	350
1929	14	22

Mace, Bombay or Wild, Unground

	Pounds.	Dollars.
1915	5,714	771
1916	22,400	6,720
1917	40,984	4,060
1918	1,791	624
1919	.....	.....
1920	3,236	397
1921	1,986	249
1922	8,964	1,494
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	2,217	1,855
1927	.....	.....
1928	4,809	2,006
1929	.....	.....

Magnesia, Calcined or Oxide

	Pounds.	Dollars.
1871	24,874	7,881
1881	20,815	6,182
1891	7,157	1,658
1901	22,383	4,099
1913	72,579	12,592
1914	109,396	15,118
1915	145,806	16,012
1916	46,008	7,560
1917	56,656	17,575
1918	12,165	4,483
1919	572	1,318
1920	38,391	15,063
1921	17,664	6,909
1922	60,998	10,474
1923	144,597	24,857
1924	113,487	34,054
1925	135,827	34,715
1926	605,754	44,838
1927	218,935	60,725
1928	259,765	48,270
1929	367,634	72,842

Magnesia Carbonate, Precipitated

	Pounds.	Dollars.
1871	132,619	15,031
1881	350,140	35,232
1891	76,015	5,608
1901	13,897	594
1913	77,190	3,811
1914	58,683	3,972
1915	49,731	2,554
1916	19,886	1,414
1917	25,092	5,077
1918	5,681	1,906
1919	232	131
1920	19,112	2,311
1921	3,760	606
1922	26,888	2,998
1923	215,815	13,285
1924	1,108,429	57,630
1925	303,367	16,356
1926	236,655	15,963
1927	263,988	17,131
1928	306,474	17,415
1929	411,625	23,751

Magnesia Chloride, Anhydrous

	Pounds.	Dollars.
1919	18,676	1,907
1920	214,107	3,371
1921	2,022,339	25,535
1922	9,011,216	102,464
1923	19,270,756	196,085
1924	56,692	2,738
1925	135,500	1,785
1926	.....	.....
1927	.....	.....
1928	44,374	315
1929	427,114	3,125

Magnesia Chloride, N. E. S.

	Pounds.	Dollars.
1924	20,818,688	117,223
1925	14,348,685	88,205
1926	14,336,772	97,930
1927	13,614,086	95,302
1928	6,997,796	51,156
1929	3,957,214	28,024

Magnesia, Silicofluoride or Fluosilicate

	Pounds.	Dollars
1927	775,736	45,416
1928	549,536	23,452
1929	217,916	12,890

Magnesia Sulphate (Epsom Salt)

	Pounds.	Dollars.
1871	85,582	1,108
1881	17,410	293
1891	16,370	207
1901	266,200	1,682
1913	9,345,099	35,739
1914	13,550,599	48,742
1915	7,005,598	32,862
1916	1,436,254	8,503
1917	54,200	875
1918	48,540	915
1919	4,350	167
1920	662,896	8,925
1921	6,591,977	108,776
1922	16,180,525	119,951
1923	15,879,648	171,592
1924	9,650,302	54,047
1925	7,986,965	51,021
1926	8,330,786	48,070
1927	11,856,798	68,736
1928	11,057,379	63,980
1929	12,082,540	68,003

Imports Into the United States

Magnesite, Crude

	*Pounds.	Dollars.
1901	65,996,858	281,901
1913	33,654,260	111,276
1914	21,590,605	46,611
1915	37,463,509	80,625
1916	101,591,459	281,951
1917	179,292,638	748,951
1918	18,552,767	104,947
1919	1,975	57,434
1920	13,881	232,708
1921	50,927	450,872
1922	60,372	907,827
1923	35,427	430,568
1924	2,890,394	11,237
1925	23,795	559
1926	963,489	5,946
1927	1,365,618	8,255
1928	1,968,266	9,160
1929	1,124,658	4,220

* Quantity stated in tons 1918-1923.

Magnesite, Caustic, Calcined

	*Pounds.	Dollars.
1913	345,322,155	1,731,443
1914	288,989,577	1,485,273
1915	125,893,407	751,766
1916	32,372,610	282,768
1917	9,448,817	182,037
1918	22,764,029	535,202
1919	12,058	532,020
1920	13,619	365,623
1921	9,425	336,539
1922	16,340	442,259
1923	28,556	631,598
1924	28,761,792	366,645
1925	31,029,564	367,195
1926	32,432,377	371,218
1927	25,772,216	280,153
1928	15,440,005	193,101
1929	11,810,039	140,914

* Quantity stated in tons 1918-1923.

Magnesite, Dead-Burned and Grain

	Pounds.	Dollars.
1924	98,118,821	809,760
1925	109,364,993	785,136
1926	122,873,186	807,338
1927	100,854,340	807,472
1928	96,606,570	700,850
1929	87,314,051	639,781

Magnesium, Metallic and Scrap

	Pounds.	Dollars.
1920	17,988	19,492
1921	43,297	34,123
1922	70,186	32,800
1923	135,622	87,591
1924	7,608	3,586
1925	1,501	785
1926	2,277	907
1927	7,385	2,105
1928	.....	.....
1929	1,000	1,048

Magnesium Powder

	Pounds.	Dollars.
1927	4,600	5,207
1928	9,110	8,282
1929	3,699	4,237

Malt Extract, Fluid and Malt Liquors

	Gallons.	Dollars
1923	905	895
1924	534	880
1925	289	522
1926	75	143
1927	1,645	2,252
1928	300	569
1929	268	1,337

Malt Extract, Fluid, in Bottles or Jugs

	Gallons.	Dollars.
1881	.....	1,036
1891	46,966	45,802
1901	1,757	1,908
1913	1,405	2,376
1914	1,284	2,087
1915	318	589
1916	64	92
1917	516	485
1918	.....	.....
1919	3	5
1920	.....	.....
1921	3,766	4,116
1922	2,079	3,340

Not stated after 1922.

Malt Extract, Fluid, in Casks

	Gallons.	Dollars.
1891	13,727	6,817
1901	8,244	4,382
1913	9,191	9,661
1914	10,333	10,050
1915	4,124	3,951
1916	2,488	2,313
1917	10,783	10,606
1918	.....	.....
1919	.....	.....
1920	20	51
1921	1,878	3,018
1922	70	113

Not stated after 1922.

Malt Extract, Solid or Condensed

	Pounds.	Dollars.
1891	.....	187
1901	.....	400
1913	.....	338
1914	.....	767
1915	.....	7,006
1916	.....	11,834
1917	.....	71
1918	.....	44
1919	.....	.....
1920	.....	.....
1921	1,563	364
1922	.....	.....
1923	70	53
1924	.....	.....
1925	72	24
1926	518	110
1927	1,307	530
1928	37,840	3,870
1929	.....	.....

Manganese Ore

	Tons.	Dollars.
1871	.....	12,321
1881	642	20,432
1891	48,559	628,672
1901	134,582	1,163,971
1913	407,169	2,195,565
1914	288,837	1,841,472
1915	206,913	1,494,965
1916	492,967	5,358,087
1917	656,026	10,542,572
1918	557,711	11,944,515
1919	373,202	16,358,741
1920	323,901	8,086,001
1921	682,770	10,199,612
1922	257,208	1,536,662
1923	228,431	2,658,688
1924	161,078	3,814,808
1925	189,087	4,978,517
1926	311,036	8,208,184
1927	349,016	10,420,088
1928	267,945	7,422,787
1929	310,670	7,273,585

Manganese Borate

	Pounds.	Dollars.
1924	17,540	1,911
1925	10,164	713
1926	24,166	1,731
1927	11,720	1,076
1928	9,670	832
1929	15,698	995

Manganese Linoleate

	Pounds.	Dollars.
1929	2,204	273

Manganese Resinate

	Pounds.	Dollars.
1924	66,490	4,980
1925	45,306	3,744
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Manganese Sulphate

	Pounds.	Dollars.
1924	85,293	4,344
1925	97,595	4,733
1926	57,729	3,080
1927	26,982	1,675
1928	24,713	1,433
1929	27,636	1,994

Manganese Compounds and Salts, N. E. S.

	Pounds.	Dollars.
1924	288,513	24,271
1925	140,430	6,613
1926	299,743	17,315
1927	286,770	16,157
1928	199,820	11,489
1929	292,487	13,146

Mangrove Extract for Tanning

	Pounds.	Dollars.
1924	5,646,528	137,394
1925	3,527,478	87,523
1926	2,093,087	57,140
1927	2,038,507	60,857
1928	633,507	22,065
1929	6,780,422	208,122

Manna, Crude

	Pounds.	Dollars
1871	.....	13,283
1881	35,456	15,061
1891	24,792	7,471
1901	24,883	12,084
1913	30,869	16,308
1914	88,240	32,848
1915	36,883	12,276
1916	68,447	32,434
1917	75,336	48,613
1918	93,097	51,032
1919	44,063	27,794
1920	112,818	52,145
1921	29,824	14,474
1922	32,768	15,025
1923	97,065	30,024
1924	24,609	12,075
1925	73,328	29,668
1926	55,049	21,496
1927	47,410	15,916
1928	67,516	26,105
1929	51,862	22,640

Manna, Advanced in Value

	Pounds.	Dollars.
1925	2,465	2,134
1926	13	14
1927	1,139	522
1928	.....	.....
1929	.....	.....

Manure Salts, Double Manure Salts and Hard Salts

	Tons.	Dollars.
1913	172,557	1,798,776
1914	260,977	2,757,013
1915	66,411	757,151
1916	2,278	42,368
1917	324	7,794
1918	225	9,047
1919	.....	.....
1920	240,899	8,215,063
1921	123,273	4,165,817
1922	81,442	957,443
1923	234,026	2,150,254
1924	244,994	2,687,062
1925	300,547	2,858,124
1926	372,124	3,716,362
1927	256,053	2,708,938
1928	375,801	5,021,710
1929	394,840	5,123,224

Marjoram Leaves, Unground

	Pounds.	Dollars.
1924	330	50
1925	.....	.....
1926	.....	.....
1927	6,963	1,816
1928	5,595	577
1929	46	25

Matches, Friction or Lucifer

		Dollars.
1871	.....	.....
1881	.....	17,676
1891	.....	88,041
1901	.....	176,909
1913	.....	721,081
1914	.....	889,338
1915	.....	653,699
1916	.....	909,430
1917	.....	1,880,808
1918	.....	3,343,800
1919	.....	1,406,151
1920	.....	945,297
1921	.....	1,135,284
1922	.....	1,904,709
1923	.....	1,997,765
1924	.....	2,054,834
1925	.....	2,225,848
1926	.....	2,194,515
1927	.....	2,231,895
1928	.....	2,249,171
1929	.....	2,235,223

Mate, Crude

	Pounds.	Dollars.
1924	2,309	808
1925	.....	.....
1926	6,922	1,995
1927	1,452	95
1928	.....	.....
1929	.....	.....

Mate, Advanced in Value

	Pounds.	Dollars.
1925	7,582	1,380
1926	.....	.....
1927	24,120	4,148
1928	55,178	8,451
1929	60,930	7,293

Meat Extracts, Fluid

	Pounds.	Dollars.
1913	29,091	11,096
1914	3,708	3,956
1915	3,738	4,428
1916	172	264
1917	1,990	3,632
1918	12	22
1919	1,613	1,677
1920	11,584	16,078
1921	2,497	2,117
1922	2,174	3,862

Not stated after 1922.

Meat Extracts, All Other

	Pounds.	Dollars.
1913	106,313	138,489
1914	130,672	198,187
1915	97,656	139,936
1916	78,614	100,652
1917	93,108	155,766
1918	1,401	1,411
1919	9,482	12,111
1920	14,375	14,114
1921	87,283	57,737
1922	123,020	116,369

Not stated after 1922.

Meat Extracts

	Pounds.	Dollars.
1923	250,889	243,644
1924	336,678	304,400
1925	267,954	223,435
1926	319,784	399,504
1927	478,644	704,373
1928	467,035	639,611
1929	778,347	947,290

Menthol

	Pounds.	Dollars.
1913	49,896	289,058
1914	127,924	408,954
1915	111,020	236,759
1916	145,203	300,589
1917	172,767	398,191
1918	172,450	446,336
1919	243,743	1,055,920
1920	181,160	1,208,908
1921	239,297	1,575,824
1922	162,263	770,694
1923	233,168	1,399,787
1924	207,624	1,539,519
1925	273,197	2,580,489
1926	407,581	2,645,302
1927	538,401	1,374,106
1928	314,807	1,094,608
1929	229,276	944,494

Mercurial Medicinal Preparations, N. E. S.

	Pounds.	Dollars.
1921	6,769	8,149
1922	1,967	1,424
1923	1,935	3,520

Included in "Mercury Preparations, N. E. S." after 1923.

Mercury Oxide (Red Precipitate)

	Pounds.	Dollars.
1924	8,728	6,672
1925	11,752	9,881
1926	36,500	34,151
1927	23,520	23,850
1928	6,148	7,189
1929	.....	.....

Mercury Preparations, N. E. S.

	Pounds.	Dollars.
1924	14,460	12,201
1925	24,262	19,887
1926	8,378	7,043
1927	12,301	13,440
1928	20,076	24,430
1929	5,358	8,941

Metacresol, Orthocresol and Paracresol

	Pounds.	Dollars.
1918	20,708	1,404
1919	11,200	1,221
1920	2,240	2,055
1921	204	175
1922	3,290	518
1923	13,714	7,361

Stated separately after 1923.

Metacresol, Orthocresol and Paracresol, Purity Less than 90%

	Pounds.	Dollars.
1924	3,213	1,697
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Metacresol, Orthocresol and Paracresol, Purity of 90% or More

	Pounds.	Dollars.
1924	9,001	1,211
1925	16,403	3,908
1926	115,352	15,071
1927	131,501	22,778
1928	115,546	30,429
1929	234,465	32,447

Methanol

	Gallons.	Dollars
1913	362	387
1914	109,022	42,598
1915	39,485	11,880
1916	46,829	9,496
1917	11,267	4,502
1918	205,276	202,994
1919	4,375	11,141
1920	566	1,956
1921	214,328	525,730
1922	20	31
1923	15,788	12,580
1923	249	128
1925	308,088	141,044
1926	494,982	223,906
1927	1,661,715	735,407
1928	637,178	224,506
1929	657,714	263,639

Methylanthraquinone

	Pounds.	Dollars.
1927	4,989	1,147
1928	.....	.....
1929	3,628	3,344

Mica, Ground

	Pounds.	Dollars.
1913	577,061	6,592
1914	401,608	4,002
1915	378,768	4,143
1916	436,087	4,302
1917	152,963	1,584
1918	111,087	1,384
1919	612	272
1920	6,995	10,223
1921	760	1,755
1922	285,295	4,289
1923	1,299,136	23,362
1924	1,444,559	23,806
1925	1,379,516	18,474
1926	420,120	5,807
1927	20,602	378
1928	150	53
1929	1,020	43

Mineral Salts Obtained by Evaporation from Mineral Waters

	Pounds.	Dollars.
1901	150,631	31,811
1913	103,337	35,420
1914	82,569	40,840
1915	10,757	9,642
1916	425	213
1917	626	313
1918	4,699,735	14,230
1919	1,414,450	10,237
1920	753,859	10,946
1921	97,708	13,814
1922	608,540	13,379
1923	37,863	18,685
1924	26,459	28,735
1925	26,890	24,019
1926	438,125	25,093
1927	111,108	22,639
1928	527,697	35,191
1929	32,605	27,660

Monazite Sand and Other Thorium Ores

	*Tons.	Dollars.
1913	1,145,010	94,425
1914	170,792	12,984
1915	1,493,028	133,819
1916	2,468,146	191,576
1917	4,020,023	263,331
1918	4,961,385	332,383
1919	952,304	55,898
1920	1,148,447	99,672
1921	1,036,420	71,745
1922	101,550	7,978
1923	3,366,044	202,249
1924	480	29,654
1925	.....	.....
1926	151	12,940
1927	596	45,837
1928	478	30,118
1929	104	5,382

* Quantity stated in pounds prior to 1924.

Morphine Sulphate

	Ounces.	Dollars.
1871	237	1,066
1881	22,358	55,531
1891	29,564	42,269
1901	50,819	147,517
1913	24,797	141,221
1914	5,805	14,220
1915	1,383	3,300
1916	2,685	8,906
1917	5,584	22,675
1918	25,115	202,263
1919	25,370	158,307
1920	7,460	32,111
1921	1,550	4,594
1922	3,460	6,406
1923	200	861

No imports allowed after 1923.

Moss and Seaweeds, Unmanufactured

		Dollars.
1913	.....	159,189
1914	.....	246,196
1915	.....	183,029
1916	.....	224,928
1917	.....	182,868
1918	.....	234,465
1919	.....	257,134
1920	.....	460,070
1921	.....	505,100
1922	.....	477,453
1923	.....	571,390
1924	.....	354,745
1925	.....	601,571
1926	.....	550,540
1927	.....	638,664
1928	.....	531,581
1929	.....	431,749

Musk, Artificial, Etc.

	Pounds.	Dollars.
1925	69,597	235,723
1926	149,080	378,568
1927	132,375	341,991
1928	148,426	455,341
1929	118,904	400,127

Musk, in Grain

	Ounces.	Dollars.
1913	.....	7,699
1914	.....	3,991
1915	.....	665
1916	.....	534
1917	.....	63,304
1918	.....	29,246
1919	6,269	7,158
1920	414	3,228
1921	3,059	30,985
1922	2,198	25,989

Not stated separately after 1922.

Musk in Pod

	Ounces.	Dollars.
1891	6,167	59,291
1901	9,353	71,300
1913	12,994	124,855
1914	3,331	30,373
1915	10,115	65,882
1916	7,390	62,094
1917	12,415	93,026
1918	5,516	33,970
1919	10,240	176,008
1920	16,058	261,320
1921	5,823	96,788
1922	5,352	70,314

Not stated separately after 1922.

Musk in Grain or Pod

	Pounds.	Dollars.
1923	754	152,314
1924	1,074	139,727
1925	627	197,644
1926	402	151,822
1927	626	204,763
1928	742	254,076
1929	748	202,908

Imports Into the United States

Myrobalans Fruit

	*Tons.	Dollars.
1913	19,735,724	195,264
1914	24,256,373	438,672
1915	18,417,434	198,347
1916	25,612,765	375,401
1917	16,087,463	421,824
1918	4,408,522	110,444
1919	9,597,836	188,517
1920	62,196,177	993,932
1921	28,077,222	372,205
1922	28,567,166	194,465
1923	47,218,672	462,755
1924	13,572	352,057
1925	11,201	325,541
1926	12,976	514,771
1927	17,213	573,839
1928	27,384	989,645
1929	13,787	454,438

* Quantity stated in pounds prior to 1924.

Naphthalene, Solidifying at Less Than 79 Degree C.

	Pounds.	Dollars.
1918	3,579,187	146,655
1919	3,591,108	109,381
1920	6,113,768	165,383
1921	13,925,789	515,078
1922	2,344,951	52,496
1923	12,153,047	287,836
1924	14,020,568	397,386
1925	2,044,728	34,256
1926	5,354,458	97,232
1927	6,419,923	118,597
1928	15,529,243	265,378
1929	32,417,444	575,710

Naphthalene, Solidifying at 79 Degree C. or Above

	Pounds.	Dollars.
1918	92,888	4,998
1919	60	10
1920	161,871	8,076
1921	3,974,776	439,233
1922	53,496	5,453
1923	32,374	2,928
1924	14,134	1,326
1925	20	15
1926	.....	.....
1927	424	125
1928	18,695	3,083
1929	.....	.....

Naphthol, Alpha and Beta, Not Medicinal

	Pounds.	Dollars.
1921	54,341	64,248
1922	279,623	49,352
1923	10,050	22,120
1924	14,352	31,771
1925	2,310	975
1926	12,955	19,155
1927	28,191	35,176
1928	47,290	98,183
1929	37,267	108,585

Naphthylamine and Naphthylenediamine

	Pounds.	Dollars.
1918	11,761	5,895
1919	.....	.....
1920	.....	.....
1921	69,695	7,208
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	250	255
1928	2,003	2,373
1929	700	820

Nickel Oxide

	Pounds.	Dollars.
1913	1,124	398
1914	2,720	1,245
1915	1,071	505
1916	497	130
1917	21,488	6,478
1918	5,534	1,406
1919	7,774	2,430
1920	1,076	324
1921	1,155	165
1922	60,698	17,414
1923	2,966,259	322,536
1924	1,407,931	176,086
1925	796,071	121,107
1926	1,777,799	247,353
1927	1,264,188	220,447
1928	961,776	140,497
1929	2,516,127	381,763

Nitroanilin, Para and Meta, Etc.

	Pounds.	Dollars.
1925	500	575
1926	29,300	9,617
1927	7,560	3,438
1928	203,872	80,904
1929	29,850	12,474

Nitrobenzol

	Pounds.	Dollars.
1920	43,623	7,222
1921	23,781	2,790

Not stated after 1922.

Nitrophenylenediamine

	Pounds.	Dollars.
1922	1,132	6,590
1923	.....	.....
1924	.....	.....
1925	.....	.....

Not stated after 1925.

Novocain or Procain

	Pounds.	Dollars.
1924	5	210
1925	.....	.....
1926	5	610
1927	3	1,020
1928	12	4,842
1929	8	4,891

Nutgalls and Gall Nuts

	Pounds.	Dollars.
1901	.....	248,746
1913	.....	126,435
1914	.....	177,788
1915	.....	137,972
1916	.....	420,030
1917	.....	214,653
1918	.....	872,173
1919	1,760,746	362,975
1920	2,776,978	647,268
1921	2,248,951	532,070
1922	565,508	75,496
1923	3,497,713	335,585
1924	2,386,592	205,402
1925	2,932,689	287,525
1926	3,359,696	350,558
1927	3,726,423	354,000
1928	2,958,351	292,999
1929	3,217,293	327,823

Nutgall Extract

	Pounds.	Dollars.
1913	145,919	18,228
1914	205,130	25,017
1915	157,084	23,262
1916	61,055	11,444
1917	45,760	9,867
1918	36,475	12,761
1919	34,033	12,508
1920	48,654	26,565
1921	4,219	1,114
1922	32,458	5,192
1923	150,505	28,455

Included in "Acid, Tannic, Not Medicinal," after 1923.

Nutmegs, Unground

	Pounds.	Dollars.
1871	919,990	390,175
1881	999,504	573,917
1891	1,324,893	684,277
1901	1,922,689	376,447
1913	3,458,339	368,984
1914	1,755,653	184,779
1915	2,879,986	283,861
1916	3,590,959	420,503
1917	4,201,872	661,012
1918	3,437,656	528,950
1919	5,893,019	674,016
1920	3,651,319	691,849
1921	3,474,243	576,103
1922	3,916,059	447,349
1923	5,081,636	572,983
1924	3,174,098	550,676
1925	3,969,050	1,160,776
1926	3,696,574	1,178,227
1927	3,837,333	1,001,192
1928	4,549,577	1,005,516
1929	3,788,156	728,615

Nutmegs, Ground

	Pounds.	Dollars.
1928	3,971	1,007
1929	14	3

Nux Vomica

	Pounds.	Dollars.
1871	496,639	13,972
1881	1,172,909	17,649
1891	1,394,813	32,930
1901	1,581,757	30,566
1913	2,306,735	39,380
1914	1,891,072	32,983
1915	2,245,338	51,507
1916	4,355,964	134,366
1917	2,445,984	86,018
1918	2,739,804	111,711
1919	4,543,710	348,559
1920	4,470,328	275,904
1921	3,190,255	272,533
1922	1,063,608	70,998
1923	2,329,747	120,349
1924	1,261,828	37,166
1925	1,612,198	50,293
1926	1,940,754	39,656
1927	3,367,132	76,747
1928	2,235,059	50,528
1929	3,117,846	82,416

Ochers, Crude, Not Ground

	Pounds.	Dollars.
1871	2,954,716	40,270
1881	3,589,600	65,393
1891	6,823,251	79,465
1901	7,410,929	55,501
1913	17,583,272	162,387
1914	21,641,976	154,547
1915	17,430,128	124,359
1916	18,049,375	153,880
1917	17,873,109	213,272
1918	7,087,557	131,055
1919	13,577,765	341,701
1920	13,204,966	229,596
1921	25,172,178	324,496
1922	11,856,246	198,701
1923	7,284,183	113,928
1924	105,087	1,913
1925	235,090	3,448
1926	235,622	4,470
1927	199,295	3,908
1928	426,174	17,920
1929	897,581	22,152

Ocher and Sienna, Washed or Ground

	Pounds.	Dollars.
1924	14,151,414	176,416
1925	19,172,432	222,105
1926	18,695,498	305,381
1927	17,565,140	370,759
1928	19,851,367	373,124
1929	18,508,875	365,225

Oilcake and Oilcake Meal, Coconut or Copra

	Pounds.	Dollars.
1917	29,867	400
1918	34,824	355
1919	3,474,947	51,607
1920	80,903,960	1,535,468
1921	117,208,327	2,038,122
1922	37,162,444	955,691
1923	62,626,038	1,041,922
1924	58,161,605	541,502
1925	55,249,461	815,736
1926	44,754,819	595,568
1927	27,802,206	301,458
1928	35,462,433	515,822
1929	35,129,909	594,185

Oilcake and Oilcake Meal, Cottonseed

	Pounds.	Dollars.
1901	.....	.....
1913	400,686	3,322
1914	5,744,090	53,214
1915	1,743,113	15,706
1916	10,289,336	108,413
1917	34,281,702	372,812
1918	29,877,055	456,848
1919	51,377,272	1,049,182
1920	35,093,455	824,834
1921	22,061,743	423,801
1922	3,890,509	51,046
1923	667,046	10,412
1924	2,461,072	45,977
1925	5,016,007	96,010
1926	969,609	14,600
1927	27,451,364	370,702
1928	25,217,982	355,285
1929	42,184,903	548,904

Oilcake and Oilcake Meal, Cottonseed and Linseed (Bibby's)

	Pounds.	Dollars.
1913	2,571,694	37,455
1914	2,406,035	24,332
1915	2,996,201	38,238
1916	10,819,746	129,843
1917	6,570,668	82,898
1918	2,751,880	84,985
1919	2,502,984	54,750
1920	1,998,424	56,746
1921	4,773,303	107,794
1922	8,209,010	151,800
1923	3,627,893	72,634
1924	442,000	5,709
1925	1,284,010	23,278
1926	377,440	7,494
1927	706,630	11,813
1928	2,292,888	33,269
1929	1,837,287	35,887

Oilcake and Oilcake Meal, Linseed

	Pounds.	Dollars.
1924	17,548,693	326,875
1925	19,087,026	347,923
1926	19,750,556	408,876
1927	39,341,526	790,747
1928	45,651,074	983,810
1929	65,751,009	1,471,674

Oilcake and Oilcake Meal, Peanut

	Pounds.	Dollars.
1920	1,120,277	30,006
1921	101,072	2,188
1922	.....	.....
1923	459,056	12,018
1924	7,382,872	140,459
1925	2,790,880	44,524
1926	2,170,000	41,757
1927	3,814,601	70,237
1928	16,792,007	378,520
1929	7,427,965	141,265

Oilcake, Soya Bean

	Pounds.	Dollars.
1913	7,004,803	93,002
1914	3,163,290	38,255
1915	5,975,592	64,307
1916	10,468,001	103,081
1917	11,760,935	136,064
1918	586,820	9,964
1919	2,763,090	129,277
1920	16,273,785	408,895
1921	31,226,207	655,805
1922	17,701,339	339,021

Not stated after 1922.

Oilcake, All Other Bean

	Pounds.	Dollars.
1913	579,794	5,914
1914	142,878	1,685
1915	724,072	13,035
1916	4,802,119	53,173
1917	895,079	11,400
1918	1,389,434	17,628
1919	614,192	14,508
1920	2,056,639	42,082
1921	10,374,980	269,166
1922	4,591,694	105,311

Not stated after 1922.

Oilcake and Oilcake Meal, Bean (Soya and Other)

	Pounds.	Dollars.
1923	27,722,028	525,018
1924	31,109,043	576,296
1925	41,315,288	773,973
1926	35,496,842	731,684
1927	32,572,056	830,427
1928	78,245,940	1,475,225
1929	152,731,087	3,213,189

Oilcake and Oilcake Meal, All Other

	Pounds.	Dollars.
1901	1,749	172
1919	352,049	23,437
1920	4,832,987	111,056
1921	10,946,891	200,299
1922	3,975,911	52,876
1923	19,387,708	364,289
1924	11,185,644	186,304
1925	6,495,406	106,607
1926	7,346,736	140,771
1927	6,389,911	126,827
1928	11,603,642	180,673
1929	14,307,639	200,371

Oil, Almond, Bitter

	Pounds.	Dollars.
1871	1,440	14,122
1881	3,642	12,342
1891	4,795	9,958
1901	4,096	9,998
1913	10,442	25,629
1914	7,525	21,954
1915	2,711	9,184
1916	3,602	18,400
1917	4,128	27,751
1918	1,887	18,154
1919	1,333	14,427
1920	4,428	19,245
1921	4,825	14,979
1922	4,461	18,270
1923	9,253	28,187
1924	6,602	19,025
1925	11,962	21,868
1926	7,138	16,748
1927	11,947	30,297
1928	11,120	27,589
1929	14,560	31,461

Oil, Almond, Sweet

	Pounds.	Dollars.
1871	18,959	5,681
1881	34,325	12,641
1891	51,384	12,249
1901	81,074	17,512
1913	152,300	63,583
1914	52,550	22,777
1915	43,321	23,495
1916	68,838	36,400
1917	38,939	23,431
1918	36,233	25,052
1919	29,586	26,456
1920	55,096	33,420
1921	43,515	21,903
1922	71,418	29,773
1923	54,430	25,529
1924	76,677	25,868
1925	56,730	36,265
1926	81,983	61,750
1927	77,844	59,384
1928	48,349	42,103
1929	88,119	62,258

Oil, Amber

	Pounds.	Dollars.
1871	2,279	583
1881	6,211	1,431
1891	3,444	894
1901	38,082	3,304
1913	18,707	1,027
1914	15,648	1,058
1915	2,720	289
1916	674	250
1917	7,580	2,932
1918	1,080	458
1919	3,900	4,530
1920	2,227	1,938
1921	1,064	354
1922	1,840	653
1923	544	361
1924	200	56
1925	1,500	694
1926	1,547	497
1927	2,750	435
1928	1,272	345
1929	6,610	303

Oil, Ambergris

	Pounds.	Dollars.
1891	78	1,509
1901	26	2,258
1916	2	212
1920	.....	.....
1921	.....	.....
1922	3	409

Not stated after 1922.

Oil, Anise

	Pounds.	Dollars.
1871	10,475	16,355
1881	27,232	49,669
1891	37,335	55,556
1901	57,564	67,926
1913	127,501	173,078
1914	42,672	55,692
1915	117,188	119,972
1916	206,609	156,411
1917	266,686	150,849
1918	160,774	122,459
1919	77,757	72,836
1920	218,382	227,172
1921	225,829	141,497
1922	42,230	21,638
1923	273,591	132,580
1924	183,819	62,743
1925	141,513	60,792
1926	131,855	77,298
1927	197,658	99,399
1928	132,865	62,201
1929	231,903	113,836

Oil, Bergamot

	Pounds.	Dollars.
1871	30,592	93,260
1881	41,796	95,390
1891	44,110	131,801
1901	75,640	143,740
1913	64,259	310,835
1914	38,647	148,753
1915	58,621	157,519
1916	69,440	178,300
1917	50,634	179,182
1918	57,689	241,465
1919	41,262	185,318
1920	92,708	360,727
1921	33,565	143,667
1922	62,566	249,302
1923	87,626	221,907
1924	84,578	246,541
1925	100,112	326,157
1926	80,926	368,903
1927	108,657	639,532
1928	101,197	413,932
1929	88,821	451,654

Oil, Birch Tar

	Pounds.	Dollars.
1914	40,123	1,898
1915	12,098	571
1916	47,767	3,183
1917	24,073	3,717
1918	110,055	22,443
1919	.....	.....
1920	220	108
1921	2,467	510
1922	3,705	1,142
1923	10,820	589
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	2,248	510
1928	1,681	400
1929	3,222	890

Oil, Cajeput

	Pounds.	Dollars.
1871	1,864	1,163
1881	7,019	4,421
1891	22,260	9,827
1901	12,350	4,472
1913	9,143	3,224
1914	14,110	4,757
1915	19,243	6,999
1916	96,626	18,992
1917	79,585	29,585
1918	9,563	3,538
1919	18,853	11,239
1920	27,775	18,629
1921	7,375	2,601
1922	2,904	1,515
1923	45,075	16,008
1924	20,025	7,850
1925	5,423	2,874
1926	14,055	5,689
1927	13,715	6,375
1928	16,776	8,274
1929	9,065	4,661

Oil, Camphor

	Pounds.	Dollars.
1913	.....	.....
1914	18,874	3,160
1915	68	12
1916	8,333	5,708
1917	224	899
1918	236,000	21,245
1919	131	56
1920	3,635	1,270
1921	39,140	6,688
1922	7,568	2,721
1923	1,890,469	155,134
1924	1,757,125	137,534
1925	2,389,676	176,336
1926	1,322,787	123,378
1927	2,680,453	248,376
1928	1,944,219	171,989
1929	3,519,481	314,137

Oil, Cananga or Ylang Ylang

	Pounds.	Dollars.
1924	24,903	100,471
1925	22,761	83,778
1926	25,173	113,326
1927	34,482	224,665
1928	35,505	221,781
1929	37,406	256,575

Oil, Caraway

	Pounds.	Dollars.
1871	6,305	8,772
1881	7,522	10,799
1891	.....	.....
1901	17,890	9,602
1913	10,107	10,453
1914	3,669	5,063
1915	18,107	20,730
1916	15,567	23,536
1917	3,723	4,208
1918	4,982	22,432
1919	.....	.....
1920	6,857	23,501
1921	6,071	11,388
1922	2,926	4,295
1923	7,125	26,575
1924	4,218	24,664
1925	7,882	30,211
1926	9,501	11,960
1927	8,460	11,571
1928	7,337	10,460
1929	8,913	13,966

Oil, Cassia and Cinnamon

	Pounds.	Dollars.
1871	25,734	26,754
1881	104,900	82,885
1891	27,980	22,732
1901	84,262	61,141
1913	123,645	97,438
1914	79,155	49,528
1915	54,902	34,411
1916	121,084	85,974
1917	153,244	130,112
1918	109,178	114,796
1919	128,150	201,295
1920	174,855	286,122
1921	102,010	133,551
1922	114,697	89,789
1923	224,782	277,883
1924	260,614	418,157
1925	325,561	500,135
1926	316,926	470,412
1927	384,578	526,710
1928	292,454	339,139
1929	362,483	436,405

Imports Into the United States

Oil, Castor

	*Pounds	Dollars.
1871	29,314	20,241
1881	1,464	959
1891	2,073	1,237
1901	462	292
1913	5,241	6,396
1914	189,583	88,053
1915	63,005	29,206
1916	253,077	223,130
1917	325,703	286,068
1918	1,175,064	1,366,573
1919	482,216	845,682
1920	271,425	298,001
1921	99,017	124,315
1922	45,734	35,260
1923	145,488	135,792
1924	271,498	32,113
1925	308,859	39,810
1926	492,504	62,170
1927	163,512	21,337
1928	933,861	92,076
1929	130,390	17,069

* Quantity stated in gallons prior to 1924.

Oil, Cedrat or Citron

	Pounds.	Dollars.
1891	311	2,836
1901	92	519
1913	115	555
1914	159	770
1915	788	3,721
1916	438	1,966
1917	.....	.....
1918	20	158
1919	336	531
1920	5	12
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	26	16
1926	287	561
1927	489	1,732
1928	497	1,586
1929	434	1,036

Oil, Chamomile

	Pounds.	Dollars.
1881	25	316
1891	19	249
1901	25	456
1913	4½	88
1914	12	247
1915	3	67
1916	.....	.....
1917	.....	.....
1918	5	60
1919	.....	.....
1920	15	233
1921	11	128
1922	10	438
1923	5	104
1924	.....	.....
1925	.....	.....
1926	6	145
1927	.....	.....
1928	4	109
1929	2	67

Oil, Chinawood, China Nut, or Tung

	*Pounds.	Dollars.
1871	131,832	79,881
1881	18,428	8,682
1891	67,312	30,641
1901	365,747	169,892
1913	6,004,045	2,738,000
1914	4,878,764	1,960,426
1915	4,723,584	1,649,270
1916	4,968,262	1,977,823
1917	6,946,631	4,046,132
1918	4,818,740	4,038,072
1919	6,218,557	7,248,054
1920	10,613,638	12,736,431
1921	4,439,975	4,817,082
1922	7,409,572	5,141,969
1923	11,918,985	10,188,994
1924	10,786,453	13,847,626
1925	94,696,963	10,957,533
1926	84,860,373	9,118,828
1927	102,428,461	12,318,928
1928	83,628,168	10,720,716
1929	115,340,121	14,396,136

* Quantity stated in gallons prior to 1925.

Oil, Citronella and Lemon Grass

	Pounds.	Dollars.
1871	18,202	13,535
1881	103,152	84,290
1891	355,735	73,764
1901	288,247	59,593
1913	885,486	287,579
1914	702,516	263,149
1915	865,376	307,676
1916	1,054,211	387,631
1917	1,082,035	445,732
1918	900,853	369,294
1919	549,837	246,576
1920	1,962,821	673,020
1921	596,697	402,686
1922	1,219,669	462,132
1923	848,283	510,152
1924	786,743	558,438
1925	1,171,911	913,787
1926	1,368,588	918,034
1927	1,259,507	631,110
1928	1,615,692	1,095,787
1929	1,327,584	575,839

Oil, Civet

	Ounces.	Dollars.
1881	.....	38
1891	.....	.....
1901	792	1,326
1913	1,155	1,688
1914	250	392
1915	5,181	7,365
1916	.....	.....
1917	.....	.....
1918	3,277	5,136
1919	361	800
1920	3,009	7,290
1921	1,504	3,711
1922	1,771	1,751
1923	16,553	29,712

Not stated after 1923.

Oil, Clove

	Pounds.	Dollars.
1924	4,940	8,537
1925	1,709	2,866
1926	3,953	6,998
1927	1,658	2,479
1928	4,531	4,187
1929	16,302	29,599

Oil, Coconut

	Pounds.	Dollars.
1871	195,462	87,288
1881	577,624	297,492
1891	10,665,054	560,833
1901	27,055,648	1,386,247
1913	50,493,858	4,182,654
1914	74,588,195	6,726,107
1915	63,249,424	5,430,581
1916	66,574,349	6,052,225
1917	79,359,009	9,141,586
1918	259,004,748	30,919,783
1919	347,200,288	43,769,146
1920	269,226,961	38,588,135
1921	166,417,897	20,287,334
1922	213,344,572	16,274,425
1923	145,807,433	10,099,173
1924	181,318,954	13,935,069
1925	250,276,667	20,250,222

Stated separately after 1925.

Oil, Coconut, Product of Philippine Islands

	Pounds.	Dollars.
1926	200,878,120	16,113,291
1927	286,776,114	23,751,536
1928	273,308,520	21,739,728
1929	377,287,815	28,708,759

Oil, Coconut, Other Countries

	Pounds.	Dollars.
1926	628,805	71,990
1927	78,598	7,201
1928	62,203	6,532
1929	38,725	4,038

Oil, Cod

	Gallons.	Dollars.
1913	466,494	135,969
1914	1,091,246	382,992
1915	1,372,413	433,142
1916	1,578,227	678,827
1917	1,163,566	728,804
1918	1,747,791	1,526,332
1919	932,948	1,091,722
1920	1,535,876	1,500,353
1921	877,521	561,195
1922	1,775,219	600,672
1923	1,959,223	986,221
1924	1,494,386	802,416
1925	1,979,623	957,603
1926	2,062,062	1,030,785
1927	2,405,472	1,221,149
1928	1,915,180	968,469
1929	1,899,446	975,064

Oil, Codliver

	Gallons.	Dollars.
1871	.....	20,476
1881	144,771	45,300
1891	249,894	98,865
1901	235,949	137,765
1913	262,516	137,872
1914	371,567	262,927
1915	264,630	157,090
1916	170,876	334,006
1917	265,557	659,192
1918	264,108	585,172
1919	161,291	449,014
1920	407,481	962,427
1921	337,139	506,849
1922	262,763	169,078
1923	414,656	272,885
1924	710,949	505,843
1925	1,136,804	859,434
1926	1,258,348	1,140,931
1927	2,063,893	2,023,043
1928	2,413,686	2,341,102
1929	2,877,230	2,019,547

Oil, Cornmint

	Pounds.	Dollars.
1927	8,840	27,644
1928	8,700	13,997
1929	8,475	12,910

Oil, Cottonseed

	Pounds.	Dollars.
1881	20	7
1891	.....	.....
1901	8,185	6,259
1913	3,383,906	185,396
1914	17,510,918	1,046,703
1915	15,162,360	728,961
1916	17,516,391	924,654
1917	12,961,339	985,616
1918	14,378,013	1,639,882
1919	20,964,012	2,685,027
1920	24,164,821	3,255,228
1921	1,315,265	131,334
1922	240	25
1923	45,297	4,575
1924	148	36
1925	.....	.....
1926	282,712	22,174
1927	6,395,939	676,342
1928	534	66
1929	435	62

Oil, Creosote, or Dead

	Gallons.	Dollars.
1901	2,072,428	155,331
1913	63,997,602	3,711,328
1914	59,271,677	3,822,919
1915	37,352,340	2,541,845
1916	40,496,987	3,206,780
1917	29,066,915	2,183,859
1918	3,857,869	329,846
1919	9,094,960	1,096,319
1920	8,338,761	1,171,717
1921	27,779,786	5,887,340
1922	39,143,044	3,965,788
1923	52,565,292	6,850,489
1924	81,353,086	13,522,540
1925	88,416,560	11,435,278
1926	84,845,630	10,927,967
1927	89,256,536	13,252,721
1928	92,371,381	14,475,542
1929	81,814,098	11,172,264

Oil, Croton

	Pounds.	Dollars.
1871	4,571	4,744
1881	2,542	2,112
1891	59	35
1901	462	219
1913	4,873	4,414
1914	6,186	5,649
1915	4,010	3,481
1916	.....	.....
1917	500	503
1918	1,200	1,274
1919	.....	.....
1920	2,478	3,142
1921	2,502	2,491
1922	1,800	1,813
1923	3,600	2,701
1924	12,753	3,442
1925	5,840	3,857
1926	660	564
1927	560	367
1928	1,350	921
1929	1,410	989

Oils, Essential and Distilled, Not Elsewhere Specified

	Pounds.	Dollars.
1901	.....	235,699
1913	.....	821,395
1914	.....	804,505
1915	.....	743,076
1916	.....	767,719
1917	.....	970,736
1918	.....	1,142,496
1919	.....	309,971
1920	.....	2,740,152
1921	.....	2,198,699
1922	.....	1,622,947
1923	.....	1,987,608
1924	149,566	338,115
1925	42,620	293,257
1926	112,880	412,117
1927	266,645	236,614
1928	145,199	165,145
1929	367,298	295,787

Oil, Eucalyptus

	Pounds.	Dollars.
1913	31,047	7,205
1914	68,053	21,079
1915	99,218	27,095
1916	110,736	29,993
1917	230,035	83,111
1918	269,275	97,874
1919	116,781	43,639
1920	291,492	137,190
1921	156,394	70,681
1922	175,901	66,871
1923	185,630	58,404
1924	247,826	91,834
1925	180,665	69,689
1926	200,749	69,925
1927	238,368	84,420
1928	308,960	117,251
1929	411,477	141,762

Oils, Expressed and Extracted, Not Elsewhere Specified

	Pounds.	Dollars.
1901	.....	21,163
1913	.....	61,027
1914	.....	49,053
1915	.....	65,437
1916	.....	118,295
1917	.....	79,889
1918	.....	138,660
1919	1,088,836	174,463
1920	644,211	134,481
1921	554,659	88,459
1922	371,440	52,828
1923	9,358,574	686,766
1924	1,519,967	97,721
1925	344,759	29,746
1926	667,838	72,783
1927	1,954,078	194,180
1928	2,057,582	178,287
1929	3,772,184	269,637

Oil, Fennel

	Pounds.	Dollars
1871	373	392
1881	1,815	2,331
1891	774	463
1901	1,839	1,353
1913	5,702	4,160
1914	4,078	2,416
1915	409	441
1916	610	789
1917	.....	.....
1918	2,094	2,512
1919	661	942
1920	1,437	2,211
1921	20	30
1922	972	1,026
1923	616	361
1924	369	324
1925	2,930	1,013
1926	920	571
1927	275	135
1928	1,002	706
1929	.....	.....

Oil, Fish, Not Specially Provided For

	Gallons.	Dollars.
1901	494,036	122,360
1913	519,121	152,803
1914	517,562	154,775
1915	439,741	108,739
1916	720,033	235,536
1917	2,280,013	863,059
1918	1,532,512	772,721
1919	1,263,374	1,019,195
1920	547,545	403,545
1921	324,646	166,792
1922	285,605	67,648
1923	733,112	225,607
1924	121,802	41,281
1925	165,373	51,076
1926	124,800	46,192
1927	62,303	21,971
1928	215,668	62,660
1929	408,865	116,468

Oil, Fusel

	Pounds.	Dollars.
1871	3,500	2,063
1881	961	290
1891	345,001	16,780
1901	2,572,343	139,190
1913	5,116,660	1,183,872
1914	5,679,801	888,869
1915	3,298,228	699,512
1916	2,162,617	695,196
1917	1,614,507	629,414
1918	1,706,528	546,589
1919	1,464,500	386,416
1920	6,192,079	1,199,995
1921	1,083,336	274,423
1922	552,036	101,636
1923	2,479,194	610,536
1924	1,651,727	741,735
1925	806,091	141,028
1926	116,612	32,343
1927	635,291	90,553
1928	131,432	20,974
1929	71,964	12,434

Includes Amyl and Butyl Alcohol prior to 1924

Oil, Geranium

	Pounds.	Dollars.
1924	105,770	591,237
1925	153,511	870,219
1926	232,085	667,639
1927	230,183	643,615
1928	164,401	463,000
1929	101,674	359,731

Oil, Hempseed

	*Pounds.	Dollars.
1881	10,615	6,751
1891	140,163	66,744
1901	528,763	264,216
1913	.....	.....
1914	375	123
1915	.....	.....
1916	10	5
1917	.....	.....
1918	25,000	21,654
1919	162,131	152,365
1920	161,346	157,596
1921	20,868	23,532
1922	16,000	7,567
1923	.....	.....
1924	38,000	2,966
1925	.....	.....
1926	1,650	99
1927	152,080	11,366
1928	.....	.....
1929	.....	.....

*Quantity stated in gallons prior to 1924.

Oil, Herring, Menhaden and Sod

	Gallons.	Dollars.
1924	534,476	182,607
1925	288,713	115,006
1926	1,089,731	445,175
1927	2,927,161	1,019,108
1928	6,233,603	2,018,675
1929	3,879,722	1,616,588

Oil, Jasmine

	Pounds.	Dollars.
1881	.....	1,629
1891	441	283
1901	1,097	3,705
1913	3,416	39,554
1914	611	14,360
1915	261	5,160
1916	978	27,592
1917	343	8,366
1918	5,840	89,310
1919	12,227	204,006
1920	3,898	145,641
1921	2,115	110,957
1922	622	16,413
1923	207	10,668
1924	11	297
1925	.....	.....
1926	16	98
1927	10	261
1928	.....	.....
1929	22	126

Oil, Juniper

	Pounds.	Dollars.
1871	7,672	4,758
1881	7,073	4,147
1891	5,798	2,778
1901	13,155	5,226
1913	17,356	13,037
1914	14,545	8,691
1915	10,388	7,637
1916	975	1,988
1917	4,661	21,514
1918	21,346	67,147
1919	1,146	6,758
1920	8,885	37,019
1921	12,546	39,000
1922	15,612	20,293
1923	20,204	20,188
1924	17,802	16,634
1925	13,976	18,999
1926	10,958	16,166
1927	9,305	18,737
1928	10,830	22,557
1929	10,371	16,909

Oil, Lavender and Spike Lavender

	Pounds.	Dollars.
1881	38,167	58,100
1891	92,224	102,819
1901	102,402	101,329
1913	227,013	482,779
1914	64,541	100,431
1915	72,989	133,375
1916	198,205	271,815
1917	144,663	237,081
1918	122,958	273,466
1919	111,411	240,823
1920	173,873	364,865
1921	84,626	183,488
1922	163,500	260,590
1923	178,581	271,392
1924	173,635	411,102
1925	209,579	743,365
1926	194,761	627,493

Stated separately after 1926.

Oil, Lavender

	Pounds.	Dollars.
1927	154,216	583,663
1928	216,083	775,329
1929	200,079	634,945

Oil, Lemon and Orange

	Pounds.	Dollars.
1871	67,619	144,405
1881	88,480	181,495

Stated separately after 1881.

Oil, Lemon (Including Terpenless)

	Pounds.	Dollars.
1891	151,469	225,755
1901	268,341	231,041
1913	410,003	794,215
1914	329,440	752,714
1915	561,387	630,338
1916	435,030	360,862
1917	557,288	459,179
1918	577,600	452,681
1919	345,799	327,370
1920	769,488	917,214
1921	543,489	559,970
1922	684,118	574,084
1923	592,089	402,427
1924	453,572	278,210
1925	580,169	416,597
1926	436,095	770,682
1927	422,398	789,126
1928	506,363	938,669
1929	384,370	1,181,390

Oil, Lignaloe or Bois de Rose

	Pounds.	Dollars.
1924	59,495	164,321
1925	52,843	178,800
1926	80,555	206,078
1927	87,743	154,874
1928	111,340	174,312
1929	111,828	156,923

Oil, Lime

	*Pounds.	Dollars.
1891	3,681	4,063
1901	5,904	5,980
1913	13,075	15,025
1914	16,559	23,828
1915	9,154	9,279
1916	19,765	29,894
1917	26,551	49,001
1918	29,137	73,685
1919	16,272	24,273
1920	61,824	87,873
1921	51,266	101,928
1922	27,200	24,343
1923	59,072	38,937
1924	40,857	36,448
1925	65,366	84,015
1926	40,749	126,335
1927	48,431	330,225
1928	33,090	212,884
1929	42,106	323,589

Oil, Linseed, Raw, Boiled or Oxidized

	*Pounds.	Dollars.
1871	89,424	24,806
1881	9,682	4,711
1891	11,629	5,828
1901	14,036	7,598
1913	172,522	110,840
1914	187,933	91,544
1915	537,810	249,611
1916	56,899	36,399
1917	110,809	76,530
1918	51,271	34,370
1919	957,573	1,199,911
1920	4,566,008	6,583,515
1921	1,906,250	1,905,330
1922	22,463,851	11,957,084
1923	10,731,809	5,045,874
1924	17,536,378	1,843,671
1925	23,958,301	2,199,418
1926	10,419,769	787,167
1927	3,816,437	268,330
1928	4,414,665	296,139
1929	363,598	26,675

* Quantity stated in gallons prior to 1924.

Imports Into the United States

Oil, Mace

	Pounds.	Dollars.
1871	187	160
1881	355	321
1891	605	613
1901	685	440
1913	5,737	2,611
1914	2,652	1,380
1915	4,776	2,605
1916	3,400	2,224
1917	3,000	2,414
1918	.....	.....
1919	.....	.....
1920	200	468
1921	.....	.....
1922	215	251
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Oil, Mineral, Crude, Petroleum

	*Barrels (42 gallons).	Dollars.
1871	356	102
1881	694	160
1891	.....	214
1901	118	17
1913	450,542,222	7,608,796
1914	843,080,788	11,779,938
1915	653,757,824	8,918,138
1916	859,736,962	12,226,179
1917	1,036,417,009	14,181,349
1918	1,348,419,493	18,239,207
1919	1,929,339,105	24,166,677
1920	2,824,332,765	33,791,375
1921	5,609,224,120	71,030,595
1922	4,710,620,837	72,960,648
1923	3,794,928,580	54,336,992
1924	3,557,189,072	65,293,250
1925	2,986,267,915	80,530,742
1926	2,408,796,807	72,079,930
1927	54,732,398	75,933,473
1928	70,577,838	88,608,193
1929	85,427,931	87,208,648

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Lubricating, Including Paraffin Oil

	*Barrels (42 gallons).	Dollars.
1913	116,192	35,193
1914	167,384	55,923
1915	60,412	11,609
1916	774,250	149,625
1917	409,746	40,710
1918	24,628	7,502
1919	551,142	75,451
1920	819,111	161,792
1921	4,344	3,792
1922	429,361	53,744
1923	2,517,850	456,870
1924	844,361	141,396
1925	1,247,983	206,091
1926	1,453,167	280,184
1927	35,447	142,724
1928	9,440	125,582
1929	27,091	378,992

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Medicinal

	Pounds.	Dollars.
1924	171,009	32,956
1925	187,988	30,812
1926	129,332	17,575
1927	1,797,438	132,038
1928	1,652,773	128,457
1929	2,580,755	187,766

Oil, Mineral, Refined, Benzin

	Gallons.	Dollars.
1913	14,162,423	1,266,896
1914	16,152,167	1,399,630
1915	6,783,627	727,855
1916	5,100	2,150

Not stated after 1916.

Oil, Mineral, Refined, Gasoline and Naphtha

	Gallons.	Dollars.
1913	570	118
1914	14,175	1,992
1915	1,136,797	34,701
1916	2,638	458

Not stated after 1916.

Oil, Mineral, Refined Benzin, Gasoline and Naphtha

	Gallons.	Dollars.
1917	10,744,592	1,396,101
1918	11,069,898	1,473,027
1919	11,760,856	1,867,863
1920	25,637,592	3,147,635
1921	31,778,815	3,711,948
1922	69,319,919	5,607,943
1923	87,801,664	7,176,506

See following classes:—

Oil, Mineral, Petroleum, Gasoline, Naphtha, and Other Finished Light Products

	*Barrels (42 gallons).	Dollars.
1924	195,270,153	16,006,282
1925	155,496,561	15,298,811
1926	195,366,990	19,562,123
1927	4,907,328	26,575,012
1928	4,362,102	24,203,335
1929	5,433,445	41,534,499

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Petroleum, Topped, Including Fuel Oil

	*Barrels (42 gallons).	
1924	389,363,276	9,311,001
1925	568,050,193	15,421,740
1926	518,938,987	14,856,089
1927	11,388,660	13,261,868
1928	7,897,701	9,710,072
1929	10,175,831	9,856,401

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Petroleum, Tops and Other Unfinished Distillates

	*Barrels (42 gallons).	Dollars.
1924	8,357,667	610,090
1925	19,889,081	1,293,396
1926	6,813,240	460,627
1927	464,449	1,501,226
1928	46,269	149,681
1929	5,693	19,152

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Petroleum Illuminating (Kerosene)

	*Barrels (42 gallons).	Dollars.
1924	275,711	43,944
1925	630,964	95,579
1926	811,291	118,643
1927	73,076	243,872
1928	153,491	614,941
1929	200,562	589,004

*Quantity stated in gallons prior to 1927.

Oil, Mineral, Refined, All Other

	Gallons.	Dollars.
1871	152	176
1881	21	7
1891	826,801	34,098
1901	24,532	5,897
1913	1,464,412	307,479
1914	1,796,093	430,664
1915	496,968	98,696
1916	1,727,683	134,815
1917	32,259,588	2,221,816
1918	43,927,718	2,406,764
1919	37,299,989	2,585,007
1920	59,040,338	3,945,465
1921	97,728,455	7,138,962
1922	112,073,487	7,179,162
1923	589,175,634	13,928,891

Included in foregoing classes after 1923.

Oil, Neroli or Orange Flower

	Pounds.	Dollars.
1891	2,757	51,984
1901	4,319	41,922
1913	38,365	171,932
1914	15,928	73,265
1915	13,251	31,478
1916	34,447	66,768
1917	23,639	66,394
1918	32,687	72,370
1919	10,595	52,853
1920	49,835	214,919
1921	22,780	95,207
1922	29,945	61,840
1923	6,551	81,502
1924	1,305	52,976
1925	695	21,216
1926	345	28,551
1927	1,045	74,510
1928	635	78,845
1929	1,287	146,060

Oil, Olive (for Manufacturing Purposes Only)

	*Pounds.	Dollars.
1871	139,051	111,450
1881	172,030	112,916
1891	503,947	242,889
1901	1,303,474	530,607
1913	725,100	483,329
1914	799,260	503,093
1915	717,361	498,689
1916	919,633	711,468
1917	787,348	736,520
1918	166,115	148,672
1919	119,842	185,767
1920	255,835	434,561
1921	261,689	267,579
1922	1,037,021	604,929
1923	5,417,706	3,336,693
1924	8,483,560	1,800,917
1925	9,406,195	1,094,574

* Quantity stated in gallons prior to 1924. Stated separately after 1925.

Oil, Clive, Edible

	*Pounds.	Dollars.
1871	142,476	257,868
1881	216,788	380,428
1891	600,936	731,006
1901	991,799	1,180,443
1913	4,772,775	6,227,526
1914	6,391,827	8,201,831
1915	6,622,246	8,119,512
1916	6,924,606	9,324,361
1917	7,707,094	10,769,754
1918	2,562,538	2,935,457
1919	4,071,766	7,573,551
1920	6,640,601	14,887,944
1921	4,683,204	12,214,272
1922	7,432,164	11,621,248
1923	76,701,825	12,291,905
1924	78,390,666	12,578,005
1925	81,324,993	13,983,787
1926	83,710,811	15,750,096
1927	86,688,172	17,378,800
1928	71,394,044	14,640,472
1929	84,003,733	15,415,597

* Quantity stated in gallons prior to 1923.

Oil, Olive, Inedible, Sulphured or Foots

	Pounds.	Dollars.
1926	45,159,425	3,522,677
1927	40,433,655	3,462,582
1928	39,423,156	3,164,954
1929	50,362,303	3,547,834

Oil, Olive, Inedible, All Other

	Pounds.	Dollars.
1926	10,903,542	1,355,411
1927	6,965,374	1,083,677
1928	9,706,039	1,448,099
1929	10,403,401	1,448,822

Oil, Orange (Including Terpenless)

	Pounds.	Dollars.
1891	27,932	44,500
1901	72,218	109,832
1913	77,797	155,299
1914	104,491	222,118
1915	97,014	140,246
1916	97,359	134,025
1917	170,722	322,373
1918	196,846	330,507
1919	126,532	246,202
1920	282,349	953,514
1921	155,765	543,098
1922	210,034	558,374
1923	226,116	487,839
1924	192,223	435,703
1925	228,814	512,209
1926	220,737	520,248
1927	197,150	459,718
1928	205,794	569,496
1929	164,566	770,524

Oil, Oleo

	Pounds.	Dollars.
1927	395	49
1928	1,330,210	129,305
1929	224,545	26,218

Oil, Origanum

	Pounds.	Dollars.
1871	33,612	17,526
1881	31,398	14,979
1891	.....	.....
1901	10,305	2,205
1913	8,822	8,502
1914	507	630
1915	14,349	15,111
1916	24,222	24,291
1917	54,671	45,859
1918	3,851	3,424
1919	2,637	5,506
1920	11,522	23,206
1921	8,950	16,488
1922	.....	.....
1923	5,900	9,774
1924	47,176	59,047
1925	102,013	120,504
1926	42,578	56,834
1927	31,289	33,959
1928	42,044	45,827
1929	53,952	56,892

Oil, Orris

	Pounds.	Dollars.
1924	2,399	6,032
1925	107	4,194
1926	122	4,189
1927	366	13,243
1928	396	16,861
1929	490	33,640

Oil, Palm

	Pounds.	Dollars.
1881	9,325,090	309,355
1891	3,507,223	135,879
1901	8,081,252	419,466
1913	48,442,662	3,368,815
1914	61,753,482	4,118,077
1915	31,482,292	2,024,827
1916	40,621,318	2,918,523
1917	36,074,059	3,316,417
1918	27,408,484	2,527,872
1919	19,280,762	1,651,230
1920	50,165,387	6,529,094
1921	31,076,224	2,765,953
1922	39,159,342	2,420,742
1923	78,815,952	8,586,201
1924	86,784,400	5,733,281
1925	114,387,981	8,778,673
1926	152,254,200	11,982,782
1927	111,183,687	8,123,908
1928	187,115,781	12,360,176
1929	228,230,017	15,328,603

Oil, Palm Kernel

	Pounds.	Dollars.
1913	23,579,152	1,850,270
1914	30,588,958	2,826,972
1915	4,908,702	446,979
1916	6,273,340	479,738
1917	1,857,038	197,237
1918	18,018	2,583
1919	1,945,345	144,826
1920	53,508	9,900
1921	2,769,144	316,754
1922	2 489,490	209,551
1923	2,858,108	237,594
1924	1,768,704	148,335
1925	37,364,493	2,266,783
1926	85,074,356	8,017,700
1927	21,435,908	1,329,332
1928	56,021,293	4,586,522
1929	80,513,906	6,392,791

Oil, Palmarosa

	Pounds.	Dollars.
1924	2,471	9,020
1925	5,820	19,097
1926	3,038	9,115
1927	6,400	14,163
1928	7,000	14,470
1929	7,229	18,992

Oil, Patchouli

	Pounds.	Dollars.
1924	2,561	13,334
1925	3,617	12,905
1926	6,313	22,933
1927	3,505	18,251
1928	3,246	18,566
1929	2,683	15,145

Oil, Peanut

	*Pounds.	Dollars.
1913	1,221,676	820,359
1914	1,332,108	915,439
1915	830,638	565,707
1916	1,466,043	824,327
1917	3,018,468	2,028,096
1918	8,279,927	7,296,214
1919	11,393,615	11,493,969
1920	22,025,653	27,752,099
1921	2,444,794	2,347,980
1922	375,819	314,989
1923	4,401,071	453,035
1924	4,981,923	499,105
1925	2,910,137	342,959
1926	3,259,632	416,304
1927	5,886,792	603,342
1928	2,308,666	291,011
1929	2,075,786	266,811

* Quantity stated in gallons prior to 1923.

Oil, Peppermint

	Pounds.	Dollars.
1891	3,049	3,918
1901	1,201	1,353
1913	3,529	13,097
1914	18,794	41,367
1915	9,200	8,959
1916	17,066	12,573
1917	23,159	37,734
1918	29,360	28,953
1919	118,741	139,466
1920	148,227	270,333
1921	28,732	31,596
1922	6,648	9,827
1923	1,523	5,468
1924	96	277
1925	7,891	46,940
1926	32,438	269,666
1927	1,031	6,940
1928	677	3,792
1929	623	2,076

Oil, Perilla

	Pounds.	Dollars.
1913	.....	.....
1914	117,893	6,090
1915	69,174	5,485
1916	65,509	5,504
1917	442,619	39,276
1918	1,015,953	105,723
1919	1,430,163	201,412
1920	8,107,141	1,376,738
1921	3,783,757	466,504
1922	1,899,352	155,665
1923	6,652,224	734,193
1924	2,933,888	301,494
1925	6,198,815	776,736
1926	6,859,894	819,792
1927	4,711,685	469,620
1928	2,289,450	263,132
1929	5,790,726	653,310

Oil, Petitgrain

	Pounds.	Dollars.
1924	40,179	64,510
1925	27,759	53,522
1926	52,178	88,198
1927	57,781	85,463
1928	48,590	69,095
1929	33,216	59,002

Oil, Pine Needle

	Pounds.	Dollars.
1924	15,826	9,028
1925	16,745	3,480
1926	29,445	5,508
1927	7,050	2,506
1928	31,704	15,528
1929	41,176	16,530

Oil, Poppy Seed, Raw, Boiled or Oxidized

	*Pounds.	Dollars.
1881	.....	1,279
1891	7,604	4,627
1901	3,125	2,388
1913	9,605	7,788
1914	7,973	6,422
1915	11,645	7,072
1916	6,337	6,816
1917	2,789	3,734
1918	20	112
1919	1,296	1,952
1920	422	1,451
1921	1,051	2,420
1922	1,691	1,754
1923	599	1,227
1924	17,993	2,253
1925	51,808	7,516
1926	66,349	10,133
1927	135,737	17,015
1928	36,718	6,594
1929	46,406	7,794

*Quantity stated in gallons prior to 1924.

Oil, Rapeseed (Colza)

	Gallons.	Dollars.
1881	.....	.....
1891	577,684	13,390
1901	.....	.....
1913	1,564,659	784,750
1914	1,463,099	704,747
1915	1,491,999	784,235
1916	2,534,679	1,414,022
1917	1,095,391	651,314
1918	2,751,875	2,697,152
1919	2,001,052	2,264,594
1920	1,229,526	1,525,747
1921	1,171,930	1,103,134
1922	1,351,827	929,370
1923	1,769,831	1,235,969
1924	2,066,513	1,364,466
1925	1,789,438	1,513,183
1926	2,097,042	1,618,523
1927	2,730,700	1,906,179
1928	2,140,503	1,646,690
1929	2,542,766	1,656,830

Oil, Rosemary

	Pounds.	Dollars.
1881	.....	6,597
1891	64,361	33,346
1901	31,283	14,723
1913	284,144	100,930
1914	85,243	30,177
1915	93,663	44,636
1916	95,815	30,544
1917	228,080	71,035
1918	204,105	71,541
1919	51,146	36,101
1920	309,210	228,749
1921	44,848	35,001
1922	159,250	63,755
1923	234,591	99,078
1924	143,603	51,067
1925	204,944	76,443
1926	106,622	50,731
1927	92,459	61,045
1928	85,508	37,357
1929	103,824	43,166

Oil, Roses (Otto of)

	Ounces.	Dollars.
1871	10,146	48,242
1881	13,168	75,120
1891	43,599	188,612
1901	45,482	192,874
1913	133,325	791,370
1914	40,454	301,000
1915	60,011	252,592
1916	40,887	169,744
1917	11,235	85,673
1918	22,653	89,049
1919	24,827	210,925
1920	80,094	657,690
1921	36,886	263,980
1922	27,700	190,923
1923	169,878	487,154
1924	66,223	331,052
1925	35,601	278,929
1926	45,015	305,020
1927	36,178	385,260
1928	30,542	342,743
1929	28,406	314,591

Oil, Rosewood

	Pounds.	Dollars.
1927	218	582
1928	2	6
1929	.....	.....

Oil, Sandalwood

	Pounds.	Dollars.
1924	53,084	251,835
1925	43,611	206,093
1926	7,774	29,197
1927	6,367	14,671
1928	7,619	25,254
1929	19,556	96,444

Oil, Seal

	Gallons.	Dollars.
1871	188,076	100,994
1881	100	72
1891	250	97
1901	1,294	459
1913	8,972	3,131
1914	179,734	64,963
1915	479,571	166,836
1916	510,062	271,979
1917	518,657	301,138
1918	143,262	109,328
1919	583,553	612,241
1920	27,951	25,101
1921	107,802	29,726
1922	316,394	88,092
1923	455,147	188,047
1924	595,878	268,820
1925	602,595	297,219
1926	338,545	166,202
1927	653,632	387,655
1928	436,084	175,292
1929	447,498	209,935

Oil, Sesame

	Pounds.	Dollars.
1871	6,012	427
1881	540,520	40,519
1891	328,091	22,084
1901	626,189	48,637
1913	1,936,647	158,442
1914	1,389,649	118,075
1915	341,545	28,653
1916	257,874	22,293
1917	76,057	11,874
1918	346,211	51,173
1919	2,335,193	357,564
1920	5,237,695	804,529
1921	79,274	15,493
1922	55,182	10,877
1923	7,539,838	846,840
1924	5,060,347	539,228
1925	6,430,660	766,008
1926	4,567,090	533,990
1927	7,067,668	829,659
1928	3,341,402	381,155
1929	19,502,131	1,792,536

Oil, Soya Bean

	Pounds.	Dollars.
1913	12,440,406	635,882
1914	16,363,645	830,870
1915	19,210,028	901,643
1916	98,171,275	5,131,582
1917	162,734,010	11,410,606
1918	336,999,646	32,836,034
1919	244,104,805	28,878,540
1920	196,108,919	25,280,085
1921	49,843,640	3,991,747
1922	3,804,130	152,975
1923	22,818,945	2,017,517
1924	18,714,151	1,323,866
1925	16,064,064	1,247,116
1926	15,649,822	1,151,424
1927	19,183,463	1,336,606
1928	14,557,885	870,398
1929	13,938,306	873,361

Oil, Spike Lavender

	Pounds.	Dollars.
1927	103,446	104,066
1928	85,460	70,339
1929	129,405	158,825

Oil, Stearin, Palm, Etc., for Candle Makers' Use

	Pounds.	Dollars.
1924	872,344	18,432
1925	81,448	4,961
1926	5,617	221
1927	76,613	3,072
1928	23,075	2,201
1929	11,648	1,149

Imports Into the United States

Oil, Thyme

	Pounds.	Dollars.
1871	725	737
1881	30,401	16,023
1891	49,487	20,549
1901	87,634	29,729
1913	138,972	105,296
1914	89,148	63,864
1915	99,580	88,498
1916	92,097	85,913
1917	91,163	90,868
1918	206,185	242,254
1919	98,324	135,914
1920	102,973	179,370
1921	81,327	116 595
1922	156,906	207,626
1923	134,866	178,455
1924	168,954	144,631
1925	92,411	65,008
1926	80,766	62,488
1927	97,370	59,630
1928	81,211	62,576
1929	81,243	57,694

Oil, Valerian

	Pounds.	Dollars.
1871	31	283
1881	117	690
1891	.....	.....
1901	61	146
1913	40	124
1914	6	12
1915	15	36
1916	.....	.....
1917	.....	.....
1918	366	3,690
1919	.....	.....
1920	57	323
1921	.....	.....
1922	40	110
1922	40	110
1923	1,118	3,257
1924	25	111
1925	54	612
1926	70	396
1927	10	62
1928	.....	.....
1929	67	176

Oil, Vetiver

	Pounds.	Dollars.
1927	2,581	22,291
1928	12,281	58,680
1929	6,012	23,958

Oil, Whale

	Gallons.	Dollars.
1871	146,797	82,758
1881	65,100	22,915
1891	51,005	14,813
1901	1,322	311
1913	1,166,339	278,208
*1914	82,756	26,553

* July 1 to October 3, 1913. Stated separately after October 3, 1923. Includes Sperm Oil Prior to October 3, 1913.

Oil, Whale, Sperm

	Gallons.	Dollars.
1914	157,142	66,652
1915	92,033	38,612
1916	59,816	25,191
1917	48,178	37,512
1918	60,328	70,229
7919	99,347	120,416
1920	124,183	102,128
1921	1,739	657
1922	24,720	13,594
1923	149,108	50,225
1924	32,896	17,922
1925	103,306	51,067
1926	314,099	117,627
1927	178,278	59,369
1928	360,600	139,255
1929	428,270	170,648

Oil, Whale, All Other

	Gallons.	Dollars.
1914	290,745	94,424
1915	604,503	215,644
1916	230,762	79,569
1917	415,163	234,097
1918	1,134,021	574,907
1919	156,915	133,998
1920	508,770	625,590
1921	308,917	113,120
1922	4,298,822	2,520,265
1923	3,587,883	1,895,666
1924	4,709,013	2,301,769
1925	6,838,206	4,036,813
1926	3,508,307	1,825,383
1927	6,059,409	2,847,296
1928	6,337,600	3,006,606
1929	8,705,203	4,037,648

Oils and Fats Changed by Vulcanizing, Oxidizing or Other Chemical Process

	Pounds.	Dollars.
1928	246,810	9,893
1929	884,505	30,456

Oils and Fats, Hydrogenated or Hardened

	Pounds.	Dollars.
1926	91,420	14,484
1927	213,938	34,615
1928	85,815	16,023
1929	31,937	3,299

Oleostearin

	Pounds.	Dollars
1913	9,540,347	967,000
1914	5,679,535	497,973
1915	2,644,460	226,661
1916	910,478	81,280
1917	1,113,277	114,640
1918	6,575,379	1,118,413
1919	1,601,574	314,308
1920	1,307,847	274,545
1921	842,908	92,279
1922	378,222	32,506
1923	40,156	3,955
1924	209,308	20,439
1925	1,529,959	167,390
1926	1,273,746	137,631
1927	1,031,464	118,865
1928	3,037,602	272,942
1929	1,660,764	149,619

Olive Nuts, Ground

	Pounds.	Dollars.
1928	10,000	320
1929	.....	.....

Opium, Aqueous Extract of, and Tinctures of, as Laudanum, Etc.

	Ounces.	Dollars.
1891	.....	219
1901	.....	660
1913	.....	671
1914	.....	5,279
1915	.....	5,565
1916	.....	6
1917	.....	222
1918	.....	.....
1919	.....	70
1920	.....	46
1921	.....	976
1922	.....	1,216
1928	.....	1,027

No imports allowed after 1928.

Opium, Containing 8.5% and Over of Anhydrous Morphine, Crude

	Pounds.	Dollars.
1871	158,620	918,974
1881	385,059	1,791,415
1891	621,749	1,582,461
1901	491,448	1,030,209
1913	441,277	2,130,154
1914	441,621	1,731,589
1915	353,006	1,699,217
1916	117,870	533,183
1917	43,016	330,652
1918	21,341	265,283
1919	74,264	977,596
1920	420,976	4,539,465
1921	78,842	428,188
1922	149,146	408,993
1923	113,730	365,441
1924	79,722	398,700
1925	91,055	805,777
1926	104,414	673,467
1927	148,239	1,013,704
1928	134,211	979,187
1929	149,330	809,106

Opium, Dried

	Pounds.	Dollars
1871	37,825	353,334
1881	76,446	761,349
1891	61,341	453,369
1901	139,519	1,141,518
1913	49,071	389,864
1914	32,095	205,684
1915	38,977	308,928
1916	44,052	243,790
1917	77,990	640,563
1918	98,498	1,514,127
1919	101,998	1,776,787
1920	1,672	14,433
1921	149	436
1922	1,525	5,869
1923	1,690	9,177

No imports allowed after 1923.

Opium, All Other Alkaloids and Salts and Esters

	Ounces.	Dollars.
1871	.....	89
1881	97	15
1891	.....	.....
1901	.....	.....
1913	9,672	28,587
1914	11,593	64,528
1915	8,626	49,584
1916	2,360	9,981
1917	34,179	165,028
1918	20,479	126,882
1919	56,895	318,361
1920	28,793	155,979
1921	573	1,315
1922	4,625	17,646
1923	200	981

No imports allowed after 1923.

Orange Mineral

	Pounds.	Dollars.
1891	1,827,569	87,405
1901	869,251	50,587
1913	287,535	18,595
1914	362,963	24,692
1915	166,202	12,279
1916	108,275	10,589
1917	54,834	7,852
1918	9,506	1,407
1919	.....	.....
1920	62,534	6,147
1921	99,340	10,987
1922	66,727	5,901
1923	134,105	10,680
1924	86,677	6,587
1925	83,709	8,109
1926	40,143	4,037
1927	68,967	5,536
1928	33,866	2,434
1929	69,489	5,816

Orchil, or Orchil Liquid

	Pounds.	Dollars.
1871	.....	3,942
1881	.....	.....
1891	.....	81,974
1901	.....	31,937
1913	.....	27,386
1914	.....	21,569
1915	.....	37,802
1916	.....	114,603
1917	.....	98,905
1918	.....	55,612
1919	259,124	30,651
1920	634,570	63,380
1921	520,275	77,409
1922	424,398	56,030

Included in "Cudbear, etc.," after 1922.

Orris, or Iris, Root

	Pounds.	Dollars.
1881	108,132	11,199
1891	230,448	25,376
1901	301,220	15,605
1913	357,963	37,326
1914	580,484	71,941
1915	554,125	52,893
1916	602,289	62,552
1917	527,539	61,494
1918	465,960	55,728
1919	406,273	68,956
1920	1,334,628	146,921
1921	235,522	17,602
1922	559,352	25,725
1923	585,905	29,760
1924	638,767	27,426
1925	540,549	30,546
1926	576,260	34,106
1927	546,656	32,391
1928	645,538	45,758
1929	564,773	64,257

Osmiridium

	Ounces, troy.	Dollars.
1914	666	43,659
1915	911	58,014
1916	302	9,654
1917	333	24,293
1918	158	16,015
1919	809	77,347
1920	2,814	302,070
1921	3,619	365,245
1922	2,735	273,401
1923	1,383	171,091
1924	1,416	177,984
1925	2,557	324,371
1926	4,293	634,779
1927	6,290	373,897
1928	6,040	335,525
1929	6,309	477,797

Osmium

	Ounces, troy.	Dollars.
1919	1,957	119,328
1920	624	29,021
1921	351	23,275
1922	608	46,153
1923	1,037	104,127
1924	1,151	110,111
1925	877	99,141
1926	877	85,498
1927	207	21,084
1928	59	3,427
1929	800	51,060

Oxgall, Bile Salts and Bile Compounds

	Pounds.	Dollars.
1924	299	469
1925	209	511
1926	95	289
1927	.....	.....
1928	14	22
1929	.....	.....

Paints, Enamel

	Pounds.	Dollars.
1913	59,457	11,877
1914	96,174	17,316
1915	86,078	6,504
1916	54,546	8,987
1917	118,571	13,902
1918	2,470	336
1919	1,908	2,641
1920	22,848	11,540
1921	52,009	20,244
1922	57,795	17,249
1923	49,836	12,408
1924	151,941	32,481
1925	115,358	21,046
1926	140,239	27,990
1927	251,212	43,176
1928	232,033	42,422
1929	150,900	31,382

Palladium

	Ounces. troy.	Dollars.
1901	.....	1,455
1914	5,986	169,171
1915	40	2,779
1916	8,011	304,559
1917	1,663	95,331
1918	1,317	148,938
1919	2,020	77,942
1920	6,518	599,471
1921	5,817	424,472
1922	12,165	639,976
1923	12,339	697,854
1924	12,918	768,514
1925	8,161	487,445
1926	8,412	495,897
1927	5,691	309,252
1928	11,382	373,815
1929	17,839	445,114

Palm and Palm Nut Kernels

	Pounds.	Dollars.
1881	.....	819
1891	.....	1,273
1901	.....	.....
1913	.....	4,872
1914	.....	23,127
1915	.....	31,900
1916	.....	1,104,885
1917	.....	626,435
1918	.....	338,778
1919	19,590,551	539,708
1920	6,758,218	420,949
1921	4,545,057	217,080
1922	302,776	20,106
1923	797,896	58,370
1924	30,030	4,382
1925	46,088	6,247
1926	207,364	17,612
1927	266,072	23,437
1928	199,303	26,643
1929	121,864	18,848

Paprika, Unground

	Pounds.	Dollars.
1925	110,121	14,827
1926	137,346	20,068
1927	17,903	3,437
1929	2,750	506

Not stated in 1928.

Paprika, Ground

	Pounds.	Dollars.
1925	2,258,109	348,641
1926	4,281,510	730,374
1927	4,761,719	1,054,373
1928	5,331,662	1,004,878
1929	4,953,640	1,053,498

Paracetaldehyde or Paraldehyde

	Pounds.	Dollars.
1924	463,720	81,119
1925	787,928	137,429
1926	494,223	71,329
1927	27,262	5,124
1928	13,449	2,611
1929	38,014	6,508

Paraffin and Paraffin Wax

(Not including oil.)

	Pounds.	Dollars.
1891	62,439	4,880
1901	263,251	13,484
1913	11,521,205	503,802
1914	7,501,463	327,402
1915	5,628,811	254,389
1916	8,526,929	418,362
1917	10,641,404	654,186
1918	8,881,023	656,474
1919	6,600,404	754,351
1920	8,687,728	820,299
1921	5,714,653	630,575
1922	5,654,930	230,862
1923	11,935,679	476,184
1924	9,959,264	484,501
1925	16,554,535	950,253
1926	9,572,545	668,229
1927	12,607,931	819,539
1928	25,188,769	1,370,580
1929	31,136,346	2,073,487

Paraformaldehyde or Solid Formaldehyde

	Pounds.	Dollars.
1925	34,816	5,920
1926	5	10
1927	500	141
1928	34,368	8,050
1929	45,136	10,730

Paris Green and London Purple

	Pounds.	Dollars.
1901	811,753	6,229
1913	165,820	7,692
1914	33,373	3,572
1915	16,800	2,975
1916	31,917	8,163
1917	.....	.....
1918	48	180
1919	18	14
1920	.....	.....
1921	992	372
1922	1,787	516
1923	102,429	20,912
1924	74,577	15,268
1925	2,595	771
1926	7,230	1,478
1927	22	6
1928	5,457	245
1929	7,822	1,252

Papaw Juice or Crude Papain

	Pounds.	Dollars.
1927	25,533	90,365
1928	94,454	272,909
1929	100,804	251,988

Peanuts, Unshelled

	Pounds.	Dollars.
1871	5,139,877	128,318
1881	40,333	724
1891	304,335	6,553
1901	738,718	18,762
1913	12,140,612	459,003
1914	17,308,778	655,448
1915	15,075,387	480,693
1916	9,623,411	353,790
1917	7,710,082	330,760
1918	3,066,678	152,313
1919	1,304,409	92,291
1920	9,786,996	792,684
1921	5,968,952	466,224
1922	2,584,829	139,223
1923	4,177,730	178,142
1924	2,861,407	123,295
1925	8,296,607	373,373
1926	4,869,543	245,158
1927	3,755,929	157,189
1928	9,759,014	426,661
1929	5,936,443	262,828

Peanuts, Shelled

	Pounds.	Dollars.
1871	720,982	25,560
1881	5,751	432
1891	148,350	18,313
1901	55,621	1,938
1913	7,823,173	428,188
1914	21,819,101	987,499
1915	11,696,507	445,143
1916	19,739,888	740,276
1917	27,548,928	1,200,308
1918	70,947,036	4,358,197
1919	15,855,266	1,086,115
1920	102,285,543	9,534,498
1921	56,137,230	5,543,412
1922	5,748,982	259,432
1923	27,350,932	1,367,598
1924	43,891,345	2,057,694
1925	65,253,489	3,163,697
1926	36,570,573	1,860,643
1927	39,174,857	1,793,904
1928	35,562,107	1,856,605

Pepper, Black and White, Ground

	Pounds.	Dollars.
1928	2,751	1,431
1929	5,026	996

Pepper, Black and White, Unground

	Pounds.	Dollars.
1871	6,895,551	485,635
1881	8,661,633	741,119
1891	13,871,442	1,372,818
1901	15,022,896	1,752,167
1913	27,568,317	2,855,184
1914	21,809,875	2,179,995
1915	26,620,992	2,685,522
1916	32,174,546	3,789,466
1917	26,586,256	4,035,410
1918	32,132,953	4,928,582
1919	22,493,585	3,590,072
1920	27,736,965	4,693,669
1921	24,593,628	2,819,661
1922	25,855,510	2,532,304
1923	30,367,210	2,206,657

Stated separately after 1923.

Pepper, Black, Unground

	Pounds.	Dollars.
1924	21,217,723	1,479,336
1925	27,191,384	2,399,470
1926	22,986,475	3,466,491
1927	18,289,315	3,642,706
1928	20,704,289	5,955,117
1929	22,840,141	6,892,262

Pepper, White, Unground

	Pounds.	Dollars.
1924	4,631,121	519,978
1925	6,063,512	939,633
1926	4,992,747	1,125,511
1927	4,440,197	1,551,887
1928	4,332,075	1,627,200
1929	2,008,875	887,123

Pepper, Capsicum, Red or Cayenne, Ground

	Pounds.	Dollars.
1871	1,376	603
1881	25,353	3,829
1891	.....	.....
1901	.....	.....
1914	1,322,308	165,807
1915	1,827,666	207,379
1916	2,265,154	271,244
1917	3,636,876	455,897
1918	1,891,744	280,071
1919	2,112,371	626,188
1920	2,399,677	941,418
1921	2,537,883	624,078
1922	3,211,432	471,426
1923	3,896,586	560,298
1924	3,268,056	561,530
1925	2,064,956	354,332
1926	220,719	36,662
1927	15,541	3,200
1929	31,961	6,500

Not stated in 1928.

Pepper, Capsicum, Red or Cayenne (Including Chili), Unground

	Pounds.	Dollars.
1871	140,936	9,241
1881	66,334	8,414
1891	2,302,326	123,092
1901	2,038,797	143,137
1914	6,522,463	711,966
1915	3,093,232	332,616
1916	4,354,041	477,044
1917	4,734,381	47,343
1918	2,712,857	315,481
1919	1,950,920	226,294
1920	2,758,607	379,228
1921	2,683,311	391,199
1922	2,389,769	315,333
1923	6,032,003	703,889
1924	4,380,308	672,838
1925	3,181,060	410,010
1926	2,407,666	273,284
1927	2,418,298	274,355
1928	2,477,316	410,459
1929	3,132,600	423,159

Pepsin and Other Enzyme Preparations, Medicinal, N. E. S.

	Pounds.	Dollars.
1924	2,004	326
1925	354	1,604
1926	18	9
1927	220	597
1928	146	1,013
1929	.....	.....

Perfumery, Etc., Containing Alcohol

	Pounds.	Dollars.
1871	.....	272,302
1881	.....	461,592
1891	.....	258,832
1901	.....	594,282
1913	286,025	819,685
1914	301,443	771,758
1915	240,075	689,930
1916	281,387	828,727
1917	359,200	1,085,869
1918	267,733	1,014,647
1919	221,041	911,014
1920	1,620,601	3,533,172
1921	1,774,025	3,639,951
1922	566,365	2,339,280
1923	635,812	3,066,899
1924	374,176	1,542,201
1925	305,732	1,597,512
1926	388,436	1,553,652
1927	320,671	1,515,960
1928	212,242	1,560,399
1929	117,795	1,283,341

Imports Into the United States

Perfumery, Etc., Not Containing Alcohol

	Pounds.	Dollars.
1922	1,556,411	2,149,714
1923	1,479,368	1,903,144
1924	536,112	484,112
1925	665,050	475,355
1926	566,118	293,494
1927	841,568	443,892
1928	421,266	336,950
1929	75,729	100,846

Persian Berry Extract

	Pounds.	Dollars.
1881	.....	.....
1891	.....	1,702
1901	.....	511
1913	64,888	7,173
1914	115,336	12,924
1915	92,876	12,245
1916	17,353	4,227
1917	8,507	1,837
1918	.....	.....
1919	.....	.....
1920	17,166	6,322
1921	.....	.....
1922	21,217	4,042
1923	15,322	2,634
1924	16,907	2,299
1925	12,994	1,849
1926	15,636	2,248
1927	29,063	4,194
1928	16,236	3,193
1929	13,703	3,732

Phenolphthalein

	Pounds.	Dollars.
1914	14,076	14,090
1915	49,326	46,295
1916	11,432	9,740
1917	3,576	7,794
1918	.....	.....
1919	100	1,200
1920	200	726
1921	.....	.....
1922	5,129	2,421
1923	3,148	17,917
1924	1,270	1,791
1925	970	3,861
1926	1,488	1,910
1927	496	645
1928	2,614	2,292
1929	2,425	2,529

Phenylenediamine, Phenylglycin, Etc.

	Pounds.	Dollars.
1919	2,246	1,225
1920	2,929	2,431
1921	.....	.....
1922	.....	.....
1923	6	16
1924	.....	.....
1925	.....	.....
1926	2,475	2,559
1927	15,258	17,318
1928	750	894
1929	305	857

Phosphate Materials, Crude, N. E. S.

	Tons.	Dollars.
1871	.....	165,703
1881	.....	918,835
1891	32,883	287,057
1901	23,535	152,780
1914	23,551	177,838
1915	2,601	26,982
1916	8,190	69,820
1917	96	1,420
1918	6	60
1919	32	323
1920	54	1,681
1921	541	9,725
1922	3,945	63,150
1923	10,729	153,410
1924	1,714	36,274
1925	6,154	129,469
1926	4,165	81,437
1927	10,389	158,423
1928	17,265	174,047
1929	40	1,221

Phosphate Rock, Crude

	Tons.	Dollars.
1924	17,084	202,165
1925	8,472	101,696
1926	8,096	103,175
1927	20,529	255,164
1928	28,322	288,417
1929	47,617	521,030

Phosphorus

	Pounds.	Dollars.
1871	.....	32,872
1881	.....	52,113
1891	151,166	53,590
1901	38,315	15,125
1914	605	264
1915	612	251
1916	.....	.....
1917	4,010	2,306
1918	88,692	57,572
1919	564,043	205,507
1920	99,806	23,462
1921	361,332	70,644
1922	648,135	86,884
1923	488,855	62,319
1924	167,251	44,278
1925	120,091	44,842
1926	146,717	55,102
1927	136,879	52,095
1928	130,848	44,922
1929	92,240	28,352

Photographic Chemicals (Coaltar)

	Pounds.	Dollars.
1917	11,322	103,580
1918	11,492	80,383
1919	14,261	99,318
1920	15,477	72,109
1921	30,727	80,632
1922	11,650	25,917
1923	17,371	29,470
1924	5,211	16,475
1925	6,958	21,728
1926	12,343	38,302
1927	26,796	68,101
1928	24,810	66,642
1929	19,997	61,237

Pigments, Black (Except Mineral Earth), Dry or Ground in Oil or Water, N. E. S.

	Pounds.	Dollars.
1925	465,157	8,094
1926	1,118,396	22,174
1927	1,292,904	36,274
1928	1,253,570	43,034
1929	1,059,424	33,562

Pigments, Iron Oxide and Iron Hydroxide

	Pounds.	Dollars.
1924	22,908,117	584,353
1925	26,516,612	624,259
1926	26,281,780	658,101
1927	26,348,690	638,511
1928	25,070,870	586,004
1929	24,392,199	578,053

Pigments, Mineral Earth, N. E. S.

	Pounds.	Dollars.
1925	252,713	9,673
1926	172,826	5,296
1927	257,383	3,998
1928	32,013	1,580
1929	6,904	1,743

Pimento (Allspice), Ground

	Pounds.	Dollars.
1928	71,330	16,999
1929	10,462	2,568

Pimento (Allspice), Unground

	Pounds.	Dollars.
1871	1,386,542	55,289
1881	1,774,344	159,960
1891	1,195,270	49,326
1901	4,254,196	208,793
1913	7,212,109	259,508
1914	1,517,971	54,506
1915	1,330,158	36,769
1916	1,355,575	46,241
1917	3,277,578	115,401
1918	4,064,556	182,847
1919	1,193,629	54,677
1920	4,064,481	314,583
1921	3,325,870	176,718
1922	4,345,769	131,117
1923	3,773,833	107,054
1924	3,394,631	106,728
1925	3,270,110	153,878
1926	2,890,134	292,076
1927	2,840,258	360,208
1928	1,286,860	316,075
1929	1,767,903	348,254

Pitch, Burgundy

	Pounds.	Dollars.
1881	58,285	1,554
1891	212,627	3,520
1901	171,771	3,650
1913	977,629	43,799
1914	1,055,327	40,480
1915	131,967	4,051
1916	14,756	673
1917	25	3
1918	100	12
1919	.....	.....
1920	.....	.....
1921	3,776	476
1922	47,191	6,532
1923	61,400	3,321
1924	105,627	5,263
1925	255,695	12,737
1926	72,789	5,156
1927	105,460	8,709
1928	127,930	9,110
1929	98,110	6,428

Pitch, Marine Glue

	Pounds.	Dollars.
1913	303,186	14,392
1914	317,506	15,154
1915	56,532	3,807
1916	481,633	20,496
1917	327,311	18,447
1918	276,702	18,860
1919	164,348	11,287
1920	173,336	11,194
1921	230,177	15,188
1922	89,975	9,431
1923	446,318	20,766
1924	589,516	25,552
1925	585,147	36,898
1926	303,457	21,468
1927	216,188	17,955
1928	126,160	13,141
1929	460,452	33,557

Plaster Rock or Gypsum, Crude

	Tons.	Dollars.
1871	112,900	88,256
1881	144,682	128,107
1891	167,606	176,588
1901	197,144	213,317
1913	386,927	462,889
1914	417,580	482,320
1915	260,161	316,308
1916	306,757	372,308
1917	230,392	276,952
1918	141,106	176,959
1919	69,538	92,548
1920	191,913	282,601
1921	234,719	359,027
1922	295,593	454,192
1923	350,509	497,339
1924	477,289	750,203
1925	421,178	681,590
1926	652,082	1,154,570
1927	741,680	1,178,088
1928	921,761	1,251,421
1929	948,202	1,289,898

Plaster Rock or Gypsum, Ground or Calcined

	Tons.	Dollars.
1871	.....	64,465
1881	.....	24,915
1891	9,243	86,809
1901	2,520	15,606
1913	3,910	26,228
1914	4,292	30,225
1915	3,943	30,333
1916	6,494	36,322
1917	12,321	107,999
1918	11,828	79,335
1919	7,416	106,131
1920	7,536	110,353
1921	11,954	151,752
1922	3,617	51,591
1923	2,088	45,463

Stated separately after 1923.

Plaster Rock or Gypsum, Ground

	Tons.	Dollars.
1924	1,887	22,163
1925	1,275	18,936
1926	3,343	48,721
1927	2,203	31,034
1928	2,254	30,192
1929	2,323	25,735

Plaster Rock or Gypsum, Calcined or Plaster of Paris

	Tons.	Dollars.
1924	3,278	58,021
1925	5,424	85,825
1926	5,190	69,292
1927	5,822	89,818
1928	3,939	74,405
1929	2,285	46,901

Plasters, Healing, or Curative, and Court Plaster.

	Pounds.	Dollars.
1913	.....	4,639
1914	.....	10,929
1915	.....	7,171
1916	.....	8,094
1917	.....	7,571
1918	.....	5,531
1919	.....	7,278
1920	.....	9,244
1921	.....	12,595
1922	.....	6,972
1923	.....	13,571
1924	6,345	10,065
1925	9,804	13,493
1926	7,294	10,608
1927	8,549	12,744
1928	9,388	13,878
1929	9,227	13,372

Plumbago or Graphite

	Tons.	Dollars.
1871	2,904	136,200
1881	8,489	381,966
1891	10,126	509,719
1901	13,110	930,002
1913	25,233	1,972,177
1914	24,866	1,846,074
1915	17,057	1,387,873
1916	30,938	4,298,530
1917	42,270	9,678,160
1918	25,440	6,018,662
1919	18,670	2,222,519
1920	20,924	2,346,302
1921	14,797	1,160,054
1922	6,279	345,815
1923	15,936	543,567

Stated separately after 1923.

Plumbago or Graphite, Amorphous

	Pounds.	Dollars.
1924	26,053,208	152,320
1925	16,860,716	119,844
1926	16,961,791	147,093
1927	18,860,269	157,663
1928	19,458,940	131,592
1929	19,425,682	137,663

Plumbago or Graphite, Crystalline Lump, Chip or Dust

	Pounds.	Dollars.
1924	11,951,651	326,782
1925	9,023,207	237,920
1926	12,891,839	503,539
1927	10,750,977	376,367
1928	12,599,902	383,259
1929	16,116,899	513,664

Plumbago or Graphite, Crystalline Flake

	Pounds.	Dollars.
1924	3,123,636	79,678
1925	2,817,127	126,783
1926	7,222,180	427,866
1927	3,805,559	208,201
1928	3,480,611	180,224
1929	7,510,847	314,694

Polishing and Cleaning Creams, Except Blanco Polish

	Pounds.	Dollars.
1891	.....	42,971
1901	.....	.....
1914	.....	6,085
1915	.....	11,600
1916	.....	14,133
1917	.....	7,208
1918	.....	22,879
1919	.....	18,402
1920	.....	15,082
1921	.....	26,235
1922	.....	11,845
1923	.....	34,600
1924	.....	34,684
1925	.....	37,637
1926	.....	34,517
1927	.....	37,141
1928	.....	103,016
1929	.....	49,875

Potash-bearing Dusts Used for Fertilizers

	Tons.	Dollars.
1924	6	220
1925	1	16
1926	202	5,932
1927	25	178
1928	4	198
1929	.....	.....

Potash Bicarbonate

	Pounds.	Dollars.
1871	170,823	10,550
1881	798,585	39,214
1891	76,828	4,344
1901	73,770	5,054
1913	311,645	14,295
1914	478,853	22,767
1915	383,534	20,341
1916	2,062	614
1918	171,528	84,387
1919	87,946	25,119
1920	5,008	1,200
1917	10,053	5,271
1921	594,287	116,495
1922	381,605	19,898
1923	703,325	38,396
1924	253,524	17,297
1925	387,064	25,353
1926	327,759	20,491
1927	633,868	36,075
1928	393,859	22,020
1929	507,201	26,803

Potash Bitartrate

(See Argols, etc.)

Potash Bromide

	Pounds.	Dollars.
1924	131,222	10,199
1925	992,244	162,465
1926	78,335	19,759
1927	58,816	16,672
1928	22,750	7,775
1929	21,744	7,797

Potash Carbonate, Crude

	Pounds.	Dollars.
1901	18,888,812	627,601
1913	10,063,912	295,066
1914	9,046,302	240,451
1915	8,620,504	291,341
1916	444,241	27,689
1917	1,069,408	185,910
1918	9,183,741	2,928,288
1919	1,092,792	373,745
1920	15,916,283	301,541
1921	3,515,339	369,699
1922	4,097,490	176,742

Not stated separately after 1922.

Potash Carbonate, Refined

	Pounds.	Dollars.
1891	7,241,999	259,537
1901	3,448,349	112,783
1913	14,035,111	412,587
1914	10,421,005	368,958
1915	2,377,940	92,959
1916	174,587	38,604
1917	202,385	53,170
1918	445,282	124,019
1919	130,040	40,080
1920	1,318,531	144,407
1921	577,275	162,255
1922	266,527	16,455

Not stated separately after 1922.

Potash Carbonate

	Pounds.	Dollars.
1923	9,468,808	503,252
1924	7,124,979	324,459
1925	8,133,313	341,975
1926	10,194,271	457,334
1927	13,139,340	691,176
1928	14,847,535	693,739
1929	19,793,281	895,521

Potash, Caustic or Hydrate, Unrefined

	Pounds.	Dollars.
1901	3,840,777	180,277
1912	8,422,007	330,684
1913	8,994,449	348,501
1914	8,565,451	326,650

Not stated after 1914; see Potash Hydroxide.

Potash, Caustic or Hydrate, Refined

	Pounds.	Dollars.
1901	86,798	7,195
1912	77,184	8,697
1913	112,822	11,920
1914	18,751	1,977

Not stated after 1914; see Potash Hydroxide.

Potash Chlorate and Perchlorate

	Pounds.	Dollars.
1871	395,068	85,315
1881	1,086,781	150,444
1891	3,361,838	341,661
1901	1,103,379	67,383
1913	1,235,732	66,609
1914	40,319	3,408
1915	27,419	4,614
1916	.....	.....
1917	437,339	194,008
1918	1,029,980	610,702
1919	315,565	113,498
1920	698,385	87,205
1921	2,060,124	179,568
1922	8,806,221	327,539
1923	9,040,975	439,730
1924	10,119,771	421,465
1925	9,834,711	406,554
1926	6,242,161	245,723

Stated separately after 1926.

Potash Chlorate

	Pounds.	Dollars.
1927	13,257,379	472,914
1928	12,619,243	454,734
1929	12,282,688	421,797

Potash Chromate and Bichromate

	Pounds.	Dollars.
1871	2,170,473	228,529
1881	4,404,237	402,088
1891	1,234,085	95,261
1901	200,519	14,401
1913	27,671	2,601
1914	34,860	2,822
1915	40,227	3,317
1916	2,291	391
1917	2,404	962
1918	20	8
1919	.....	.....
1920	19,864	6,961
1921	331	89
1922	74,850	7,052
1923	8,301	1,710
1924	8,862	1,631
1925	7,950	1,402
1926	6,107	1,092
1927	7,756	1,321
1928	4,708	853
1929	8,598	1,482

Potash, Crude, or Black Salts

	Pounds	Dollars.
1881	.....	1,227
1891	.....	.....
1901	.....	.....
1914	2,599,883	52,994
1915	4,076,783	83,502
1916	1,504,149	53,752
1917	2,819,235	233,111
1918	727,588	112,235
1919	268,441	12,814
1920	4,912,740	144,317
1921	10,681,304	309,030
1922	3,642,249	84,884

Not stated after 1922.

Potash Cyanide

	Pounds.	Dollars.
1901	2,029,993	475,833
1913	950,890	137,535
1914	1,236,799	183,259
1915	747,627	143,331
1916	43,705	9,311
1917	70,147	49,513
1918	13,456	3,150
1919	444,581	32,161
1920	5,175,608	430,373
1921	13,353,271	977,664
1922	2,007,752	175,019
1923	3,019,859	243,809
1924	2,577,901	205,552
1925	1,149,928	111,112
1926	1,910,319	197,680
1927	100,450	36,678
1928	334,488	64,193
1929	109,018	42,643

Potash Hydroxide (Caustic)

	Pounds.	Dollars.
1891	1,891,607	85,595
1915	4,993,471	225,0[illegible]
1916	39,770	9,222
1917	74,780	33,648
1918	11,732	4,398
1919	466,620	124,563
1920	782,477	220,163
1921	4,934,697	474,479
1922	15,079,586	685,716
1923	11,103,132	692,835
1924	11,210,695	647,320
1925	12,706,761	740,075
1926	13,081,524	774,769
1927	13,659,460	812,537
1928	12,587,996	792,653
1929	13,930,230	917,233

See "Potash, Caustic, Etc.," for 1912, 1913 and 1914.

Potash Iodide

	Pounds.	Dollars.
1871	17,842	49,503
1881	480	1,267
1891	1,024	935
1901	663	1,328
1913	120	239
1914	270	491
1915	4	13
1916	309	1,032
1917	24,357	58,752
1918	65,992	133,611
1919	25,963	74,834
1920	11,377	34,766
1921	890	2,435
1922	.....	.....
1923	14	92
1924	34	137
1925	63	253
1926	7	39
1927	10	75
1928	4	16
1929	813	3,302

Imports Into the United States

Potash Muriate, Crude

	Tons.	Dollars.
1871	.....	61,270
1881	11,401	335,799
1891	37,927	1,182,007
1901	69,281	2,083,641
1913	223,887	6,737,757
1914	284,856	7,925,781
1915	102,882	3,660,353
1916	2,126	490,888
1917	606	174,806
1918	596	166,979
1919	1,677	201,307
1920	110,324	11,038,173
1921	49,911	5,290,196
1922	131,423	5,549,580
1923	149,372	4,694,569
1924	119,605	3,828,891
1925	154,772	4,767,146
1926	181,015	5,801,061
1927	162,831	5,252,086
1928	192,132	6,799,306
1929	224,942	7,935,220

Potash Nitrate, Crude

(See Saltpeter, Crude.)

Potash Nitrate, Refined

	*Pounds.	Dollars.
1871	67	7,820
1881	162	19,535
1891	79	6,194
1901	216	18,433
1913	197	22,142
1914	166	20,173
1915	34	4,222
1916	2	749
1917	288	35,143
1918	43	16,193
1919	1	96
1920	103	20,658
1921	14,444	107,649
1922	683	48,558
1923	1,974	554,097
1924	4,370,193	192,437
1925	8,208,966	331,842
1926	9,414,892	484,007
1927	8,479,211	372,691
1928	9,776,195	392,314
1929	14,288,258	546,430

* Quantity stated in tons prior to 1924.

Potash Perchlorate

	Pounds.	Dollars.
1927	279,085	20,816
1928	606,907	42,274
1929	455,481	34,934

Potash Permanganate

	Pounds.	Dollars.
1871	2,735,769	112,521
1881	.....	.....
1891	.....	.....
1901	.....	.....
1913	357,366	25,314
1914	1,351,855	91,065
1915	1,039,304	78,924
1916	214,291	57,306
1917	6,946	11,727
1918	43,826	106,104
1919	18,107	43,830
1920	9,446	5,100
1921	104,041	47,984
1922	856,067	109,085
1923	922,791	116,996
1924	536,001	65,225
1925	164,313	13,964
1926	42,558	4,068
1927	347,799	29,669
1928	416,008	36,032
1929	351,085	32,486

Potash Prussiate, Red (Ferricyanide)

	Pounds.	Dollars.
1871	17,480	7,222
1881	106,424	49,685
1891	35,826	10,650
1901	30,262	7,357
1913	65,316	11,302
1914	89,976	15,325
1915	83,574	14,922
1916	2,560	3,520
1917	4,523	10,425
1918	9,824	18,496
1919	13,992	25,497
1920	87,506	52,483
1921	66,004	30,232
1922	39,716	15,121
1923	114,142	75,850
1924	71,585	29,705
1925	115,666	32,498
1926	108,015	30,390
1927	167,333	46,444
1928	100,532	28,545
1929	123,519	32,854

Potash Prussiate, Yellow (Ferrocyanide)

	Pounds.	Dollars.
1871	255,325	58,009
1881	544,167	108,954
1891	2,223,154	368,366
1901	1,609,358	218,908
1913	2,812,408	309,302
1914	3,508,228	390,021
1915	2,316,736	255,711
1916	44,156	31,651
1917	41,128	32,251
1918	134,638	111,096
1919	58,003	45,869
1920	1,141,224	188,797
1921	398,961	99,211
1922	515,633	109,228
1923	603,272	150,122
1924	331,335	52,237
1925	238,643	31,337
1926	182,685	20,875
1927	167,589	22,208
1928	125,948	16,178
1929	150,068	19,359

Potash Sulphate, Crude

	Tons.	Dollars.
1891	1,362	49,619
1901	15,632	558,136
1913	48,023	1,798,369
1914	44,986	1,687,491
1915	21,705	1,071,623
1916	2,427	197,808
1917	656	20,538
1918	136	19,837
1919	137	23,304
1920	6,356	1,073,322
1921	12,081	1,660,798
1922	45,280	2,085,348
1923	51,885	2,118,979
1924	68,354	2,682,881
1925	67,331	2,554,808
1926	61,465	2,409,174
1927	70,634	2,871,368
1928	81,385	3,608,808
1929	82,659	3,767,823

Potash Salts, Not Elsewhere Specified

	Pounds.	Dollars.
1924	89,666	4,521
1925	59,406	4,345
1926	98,077	9,923
1927	201,436	20,306
1928	242,258	36,797
1929	273,564	30,441

Potassium Aluminum Sulphate or Potash Alum

	Pounds.	Dollars.
1924	2,566,611	56,063
1925	3,387,873	57,749
1926	3,362,640	59,181
1927	2,755,804	44,979
1928	1,201,995	21,103
1929	940,032	23,082

Potassium

	Pounds.	Dollars.
1921	15,227	581
1922	42,869	3,643
1923	4,013	740
1924	103	52
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	61	603

Potassium and Sodium Tartrate (Rochelle Salt)

	Pounds.	Dollars.
1871	100	27
1881	33	9
1891	547	100
1901	272	33
1914	186,305	23,419
1915	253,609	19,244
1916	187	47
1917	17,840	4,352
1918	31,160	8,614
1919	6,742	2,966
1920	69,440	17,580
1921	246,698	48,614
1922	472,628	67,496
1923	527,773	48,918
1924	305,064	37,507
1925	372,468	40,890
1926	271,674	31,118
1927	264,544	31,703
1928	155,233	18,596
1929	15,462	2,252

Press Cloth for Oil Milling Purposes

	Pounds.	Dollars.
1920	8,502	9,225
1921	11,582	13,643
1922	8,401	6,559
1923	32,560	40,372
1924	120,464	46,612
1925	195,323	66,270
1926	166,582	74,517
1927	299,048	131,302
1928	43,114	22,565
1929	74,831	35,490

Propylene Chlorohydrin, Dichloride, and Glycol

	Pounds.	Dollars.
1926	231	311
1927	4,409	504
1928	.....	.....
1929	.....	.....

Putty (Whiting, Ground in Oil)

	Pounds.	Dollars.
1871	5,534	118
1881	287	28
1891	122	14
1901	15,362	378
1913	36,434	881
1914	37,020	911
1915	18,078	343
1916	16,082	386
1917	33,286	1,472
1918	36,398	3,781
1919	4,735	811
1920	96,572	4,717
1921	393,136	12,420
1922	744,495	13,947
1923	871,458	18,519
1924	156,156	5,180
1925	316,662	14,175
1926	165,888	4,770
1927	223,765	3,901
1928	394,107	8,259
1929	247,013	4,466

Pyrethrum or Insecticide Flowers, Crude

	Pounds.	Dollars.
1918	2,298,476	422,751
1919	3,399,026	667,374
1920	6,827,700	2,672,576
1921	3,958,657	1,749,213
1922	2,600,093	789,988
1923	3,962,222	1,742,108
1924	2,950,269	1,316,503
1925	3,812,093	1,022,043
1926	8,945,124	1,344,645
1927	10,472,479	1,271,335
1928	11,377,445	2,425,171
1929	9,502,461	2,775,826

Pyrethrum or Insecticide Flowers, Advanced in Value

	Pounds.	Dollars.
1924	162,880	60,702
1925	44,385	16,305
1926	4,495	1,074
1927	34,419	7,413
1928	68,721	16,199
1929	10,000	3,224

Pyridin and Quinolin

	Pounds.	Dollars.
1918	11,981	1,051
1919	123,049	15,248
1920	493,383	56,604
1921	434,668	121,437
1922	148,911	22,075
1923	363,762	92,398

Stated separately after 1923.

Pyridin

	Pounds.	Dollars.
1924	641,689	278,254
1925	661 791	306 353
1926	964,935	487,803
1927	418,359	181,106
1928	29,281	9,150
1929	58,612	8,591

Pyroxylin Compounds, or Other Cellulose Esters

	Pounds.	Dollars.
1881	.....	2
1891	.....	11,785
1901	.....	725
1913	.....	288,639
1914	.....	583,391
1915	.....	371,714
1916	.....	127,627
1917	.....	53,693
1918	.....	53,054
1919	.....	43,172
1920	.....	77,673
1921	.....	155,536
1922	.....	36,069
1923	.....	629,972
1924	.....	1,748,420
1925	.....	1,469,323
1926	.....	2,306,646
1927	.....	2,800,443
1928	.....	2,627,782
1929	403,418	405,795

Quassia

	Pounds.	Dollars.
1924	894,250	5,799
1925	443,319	3,801
1926	1,286,773	12,182
1927	688,972	8,561
1928	2,030,341	15,049
1929	2,254,458	7,260

Quebracho Extract

	Pounds.	Dollars.
1913	63,904,814	1,672,314
1914	99,605,839	2,699,104
1915	125,565,857	3,676,749
1916	81,501,892	5,432,458
1917	61,977,849	5,382,433
1918	101,523,282	4,917,212
1919	137,151,143	5,856,803
1920	154,944,717	8,123,641
1921	110,184,308	6,602,449
1922	134,274,423	5,205,641
1923	119,825,707	4,716,221
1924	118,919,230	3,546,774
1925	101,130,658	3,203,155
1926	115,758,079	3,980,893
1927	106,292,121	4,472,836
1928	99,049,084	4,445,350
1929	82,146,498	3,746,767

Quebracho Wood.

	Tons.	Dollars.
1913	101,869	1,300,126
1914	73,957	900,880
1915	54,715	750,873
1916	106,864	1,598,465
1917	95,211	1,086,946
1918	53,871	848,671
1919	2,689	31,048
1920	33,672	480,503
1921	32,901	531,566
1922	23,987	265,910
1923	42,297	556,354
1924	28,215	440,165
1925	22,645	354,596
1926	26,453	472,966
1927	44,724	698,674
1928	72,821	1,263,965
1929	70,134	999,368

Quicksilver or Mercury

	Pounds.	Dollars.
1871	239,223	107,646
1881	138,517	57,733
1891	457,056	254,837
1901	1,666	899
1913	380	287
1914	444,673	192,609
1915	561,924	292,244
1916	554,852	595,057
1917	242,526	239,401
1918	580,460	641,316
1919	319,074	338,595
1920	1,227,582	1,184,374
1921	728,105	616,517
1922	986,956	502,824
1923	1,506,682	960,823
1924	1,178,450	632,688
1925	1,120,970	754,842
1926	1,940,041	1,581,787
1927	1,795,242	1,832,599
1928	1,113,228	1,477,125
1929	1,131,314	1,351,568

Quicksilver Flasks, Bottles and Drums Used in Exporting Acids or Other Chemicals

	Number.	Dollars.
1913	.....	259,123
1914	.....	280,620
1915	.....	180,676
1916	.....	204,642
1917	.....	168,955
1918	.....	393,523
1919	.....	861,168
1920	.....	855,963
1921	.....	895,725
1922	.....	1,145,102
1923	.....	844,278
1924	.....	85,568
1925	.....	44,970
1926	.....	118,836
1927	13,234	173,215
1928	106,092	1,387,524
1929	89,802	1,462,657

Quinidine and Its Salts

	Ounces.	Dollars.
1924	415,011	20,985
1925	12,208	7,496
1926	126,740	38,470
1927	40,500	24,207
1928	67,000	24,401
1929	224,100	121,139

Quinine Alkaloid

	Ounces.	Dollars
1924	165,700	94,538
1925	163,000	86,541
1926	9,788	6,765
1927	279,390	153,243
1928	174,400	109,613
1929	197,138	91,028

Quinine, Crude

	Ounces.	Dollars.
1924	124,292	51,075
1925	406,536	204,599
1926	213,700	103,447

Not stated after 1926.

Quinine Sulphate

	Ounces.	Dollars.
1871	10,861	12,261
1881	408,851	1,052,228
1891	3,079,000	805,729
1901	3,495,996	1,078,472
1913	2,279,734	397,409
1914	2,224,765	486,641
1915	1,508,931	378,511
1916	1,409,228	1,022,821
1917	623,947	324,438
1918	1,256,172	593,019
1919	2,101,006	1,238,125
1920	2,888,550	1,376,514
1921	1,935,531	1,489,166
1922	1,008,600	594,178
1923	2,926,988	1,176,808
1924	2,270,382	1,123,999
1925	1,482,390	650,901
1926	1,519,832	690,746
1927	1,804,914	687,831
1928	1,791,746	676,049
1929	2,452,406	845,856

Quinine, Other Salts and Derivatives

	Ounces.	Dollars
1924	271,806	134,491
1925	337,585	136,977
1926	122,828	62,262
1927	194,678	91,893
1928	165,696	73,392
1929	107,726	48,380

Radio-Active Substitutes

		Dollars.
1928	.....	669
1929	.....	2,483

Radium Salts

	Grains.	Dollars.
1914	.....	29,983
1915	.....	29,983
1916	.....	3,712
1917	.....	50
1918	.....	.....
1919	11	892
1920	12	11,033
1921	807	3,027
1922	913	15,719
1923	80	268,646
1924	116	417,758
1925	141	452,811
1926	126	306,470
1927	174	571,863
1928	144	486,411
1929	153	526,890

Red Lead

	Pounds.	Dollars.
1871	1,295,616	78,411
1881	212,423	10,009
1891	519,613	20,950
1901	524,935	23,933
1913	145,478	7,223
*1914	69,867	5,674
1915	6,697	342
1916	196	43
1917	20,471	5,296
1918	5	1
1919	7,184	1,134
1920	345	73
1921	22,772	1,720
1922	12,715	729
1923	1,110	72
1924	4,014	241
1925	2,800	232
1926	2,952	238
1927	28,828	2,496
1928	45,303	3,522
1929	20,025	1,299

* 20,040 pounds, $3,681, came in free of duty for construction and equipment of vessels.

Rennets

	Pounds.	Dollars.
1871	.....	254
1881	.....	34,261
1891	.....	90,042
1901	.....	90,812
1913	.....	129,588
1914	.....	129,720
1915	.....	106,614
1916	.....	86,694
1917	.....	13,254
1918	.....	62,173
1919	40,905	97,964
1920	185,652	159,039
1921	122,968	72,092
1922	186,939	81,351
1923	287,201	75,176
1924	249,388	74,557
1925	171,623	63,643
1926	170,544	139,206
1927	137,127	109,901
1928	127,292	66,161
1929	156,888	61,908

Resorcinol, Medicinal

	Pounds.	Dollars.
1920	5,159	2,642
1921	156,028	112,312
1922	.....	.....
1923	6,720	8,390
1924	.....	.....
1925	14,525	18,824
1926	7,622	9,901
1927	6,340	13,390
1928	6,606	10,269
1929	19,464	28,826

Resorcinol, Not Medicinal

	Pounds.	Dollars.
1924	8,040	11,946
1925	7,770	10,490
1926	17,640	23,808
1927	18,869	24,359
1928	45,820	54,335
1929	37,004	46,228

Rochelle Salt

(See Potassium and Sodium Tartrate)

Rhubarb Root

	Pounds.	Dollars.
1881	163,519	42,607
1891	90,592	18,406
1901	216,803	20,766
1913	121,701	16,554
1914	181,240	22,354
1915	233,399	24,592
1916	155,924	17,701
1917	238,601	32,084
1918	190,962	20,879
1919	119,245	46,903
1920	283,138	234,757
1921	109,626	64,997
1922	125,212	44,088
1923	197,518	58,047
1924	174,087	48,736
1925	148,080	35,248
1926	125,663	32,074
1927	258,032	80,405
1928	156,796	52,407
1929	199,198	55,658

Rose Leaves

	Pounds.	Dollars.
1891	.....	6,966
1901	.....	1,678
1913	.....	97
1914	.....	1,434
1915	.....	484
1916	.....	1,060
1917	.....	4,199
1918	.....	4,164
1919	1,399	557
1920	25,627	10,566
1921	9,536	4,153
1922	7,255	2,606
1923	14,671	3,427
1924	12,706	3,871
1925	5,085	2,544
1926	33,602	7,311
1927	22,229	5,507
1928	40,858	14,269
1929	87,153	29,973

Rosin, Violin

		Dollars.
1871	.....	460
1881	.....	4,636
1891	.....	136
1901	.....	3,470
1913	.....	30,621
1914	.....	11,625
1915	.....	6,532
1916	.....	4,893
1917	.....	2,872
1918	.....	3,746
1919	.....	2,292
1920	.....	6,506
1921	.....	7,300
1922	.....	8,021
1923	.....	16,664
1924	.....	16,256
1925	.....	12,656
1926	.....	17,077
1927	.....	21,525
1928	.....	13,025
1929	.....	12,267

Imports Into the United States

Saccharides

	Pounds.	Dollars.
1924	15,833	13,784
1925	15,775	20,138
1926	3,928	13,208
1927	18,070	22,660
1928	372,882	58,085
1929	250,321	43,042

Saccharin

	Pounds.	Dollars.
1901	29,334	35,734
1913	47	64
1914	8	30
1915	5,617	6,737
1916	12,954	76,789
1917	1,596	18,276
1918	1	48
1919	.....	.....
1920	.....	.....
1921	40	39
1922	46	118
1923	1	14
1924	.....	.....
1925	51	17
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Saffron, Crude

	Pounds.	Dollars.
1927	5,242	90,051
1928	4,760	52,892
1929	5,080	51,513

Saffron, Safflower, and Saffron Cake Extract

	Pounds.	Dollars.
1871	.....	294
1881	.....	54,326
1891	.....	44,599
1901	.....	42,502
1913	.....	93,146
1914	.....	85,678
1915	.....	70,132
1916	.....	111,420
1917	.....	124,235
1918	.....	54,109
1919	16,459	77,273
1920	25,704	138,732
1921	22,969	67,454
1922	26,273	88,584
1923	16,215	63,506
1924	3,008	23,429
1925	5,077	14,016
1926	3,165	5,759
1927	1,371	2,254
1928	471	1,187
1929	2,488	1,998

Sage, Unground.

	Pounds.	Dollars.
1913	1,299,120	19,893
1914	2,005,469	39,309
1915	822,083	48,454
1916	1,865,815	130,464
1917	1,528,828	92,409
1918	1,364,295	150,004
1919	977,440	143,257
1920	1,418,414	159,878
1921	2,270,304	174,773
1922	1,562,480	66,391
1923	1,877,407	55,379
1924	2,084,325	59,309
1925	1,857,423	43,384
1926	1,496,848	38,874
1927	1,408,845	39,701
1928	1,738,446	52,337
1929	1,923,659	57,198

Sage, Ground

	Pounds.	Dollars.
1928	3,780	262
1929	38	25

Sago, Crude, and Sago Flour.

	Pounds.	Dollars.
1871	1,719,256	45,601
1881	1,247,219	38,845
1891	3,970,504	101,303
1901	51,991	1,588
1913	12,389,192	230,992
1914	9,970,717	160,924
1915	6,630,400	106,090
1916	10,999,587	234,073
1917	7,893,055	204,864
1918	22,179,761	854,261
1919	3,092,967	104,915
1920	6,115,486	332,327
1921	2,591,377	86,583
1922	5,868,870	132,454
1923	7,591,363	206,265

Stated separately after 1923.

Sago, Crude

	Pounds.	Dollars.
1924	2,755,692	63,269
1925	71,401	3,382
1926	292,310	9,392
1927	235,543	8,132
1928	531,519	6,188
1929	119,326	4,901

Sago Flour

	Pounds.	Dollars.
1924	5,649,356	144,495
1925	5,895,116	163,253
1926	5,768,575	164,183
1927	5,050,136	143,835
1928	5,740,245	151,860
1929	4,657,811	97,685

Sal Ammoniac

(See Ammonia Chloride)

Salicin

	*Ounces.	Dollars.
1881	.....	6,410
1891	4,987	6,423
1901	4,506	14,935
1913	5,274	12,146
1914	4,129	14,982
1915	1,800	6,560
1916	453	2,135
1917	390	2,307
1918	319	2,845
1919	560	5,791
1920	1,374	16,379
1921	1,843	19,771
1922	2,000	7,770
1923	2,618	6,641
1924	7,370	2,351
1925	19,684	4,308
1926	29,318	5,518
1927	25,088	4,089
1928	27,559	5,023
1929	34,604	6,583

* Stated in pounds prior to 1925.

Salol

	Pounds.	Dollars.
1914	660	219
1915	28,430	11,445
1916	4,069	2,182
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	21	105

Salt

	100 pounds.	Dollars.
1912	2,901,815	379,540
1913	2,508,561	356,911
1914	3,397,496	456,426

Stated separately after 1914; see following classes.

Salt in Bags, Barrels or Other Packages

	*Pounds.	Dollars.
1871	2,839,938	800,454
1881	4,124,422	1,242,543
1891	1,736,861	584,845
1901	1,114,571	372,482
1915	620,462	213,676
1916	552,616	195,791
1917	375,658	176,784
1918	268,426	158,832
1919	117,690	107,941
1920	1,463,794	280,684
1921	643,076	264,852
1922	784,226	322,153
1923	417,370	210,260
1924	17,224,372	166,980
1925	19,035,256	118,850
1926	13,494,824	110,572
1927	8,860,799	81,391
1928	7,066,416	61,055
1929	6,904,463	45,158

* Stated as "100 lbs." prior to 1925.

Salt in Bulk

	*Pounds.	Dollars.
1871	2,747,351	355,318
1881	5,293,610	658,068
1891	2,504,581	258,270
1901	1,920,837	187,681
1915	1,959,638	172,888
1916	1,591,032	134,975
1917	1,808,867	158,096
1918	755,044	145,640
1919	577,416	99,988
1920	292,446	174,364
1921	1,843,017	365,190
1922	*817,899	258,558
1923	1,412,040	335,020
1924	48,052,607	110,213
1925	112,124,461	122,501
1926	93,431,852	106,979
1927	32,185,494	44,385
1928	33,046,186	46,523
1929	55,593,285	66,138

* Stated as "100 lbs." prior to 1925.

Saltpeter, Crude

	*Tons.	Dollars.
1871	5,072,381	208,423
1881	11,014,226	414,630
1891	16,090,486	494,121
1901	41,343,897	473,578
1913	10,989,382	288,995
1914	3,547,252	115,470
1915	677,785	22,483
1916	5,412,130	734,128
1917	10,171,654	904,506
1918	8,715,327	956,853
1919	34,557,048	1,298,391
1920	20,862,012	929,045
1921	30,868,786	1,407,044
1922	6,208,779	189,569
1923	5,581,009	168,410
1924	1,600	102,017
1925	3,235	179,095
1926	11,869	675,134
1927	6,468	333,095
1928	7,692	322,710
1929	10,668	403,243

* Quantity stated in pounds prior to 1924.

Salvarsan, Arsphenamine, and Similar Arsenical Medicinal Compounds

	Pounds.	Dollars.
1924	4	35
1925	.....	.....
1926	2,229	26,032
1927	22	2,541
1928	138	12,301
1929	23	10,275

Santonin and Its Salts

	Pounds.	Dollars.
1871	983	6,035
1881	483	2,317
1891	5	7
1901	6,584	11,984
1913	1,982	44,358
1914	5,230	125,128
1915	912	25,558
1916	20,925	586,850
1917	111	3,966
1918	223	7,502
1919	1,125	49,688
1920	2,778	162,335
1921	2,613	256,864
1922	7,960	959,153
1923	1,292	203,974
1924	1,444	150,049
1925	1,389	50,304
1926	1,552	61,361
1927	1,731	130,711
1928	1,535	180,968
1929	2,270	266,812

Sarsaparilla Root

	Pounds.	Dollars.
1871	242,314	46,067
1881	270,820	63,641
1891	631,985	90,694
1901	675,928	55,790
1913	301,308	38,360
1914	224,970	36,294
1915	250,178	36,055
1916	291,276	41,489
1917	146,047	18,994
1918	110,709	31,454
1919	221,946	58,126
1920	289,175	90,291
1921	128,043	35,344
1922	179,388	46,584
1923	186,763	51,510
1924	249,807	50,597
1925	122,573	26,544
1926	158,449	37,297
1927	211,578	45,818
1928	121,036	23,479
1929	105,657	22,243

Satin White and Precipitated Calcium Sulphate

	Pounds.	Dollars.
1926	2,478	86
1927	2,632	110
1928	970	15
1929	5,704	244

Scammony

	Pounds.	Dollars.
1924	47,066	1,537
1925	12,046	649
1926	62,334	2,522
1927	35,742	1,138
1928	130,685	4,280
1929	38,051	1,361

Seed, Anise

	Pounds.	Dollars.
1871	93,847	8,625
1881	367,186	29,386
1891	300,880	19,348
1901	391,659	20,356
1913	1,250,831	84,941
1914	231,117	15,412
1915	432,863	30,932
1916	789,487	68,713
1917	475,100	67,221
1918	364,406	61,330
1919	261,837	34,610
1920	658,425	115,358
1921	292,620	39,440
1922	441,085	46,913
1923	461,067	66,869
1924	646,605	77,803
1925	266,540	30,349
1926	433,371	44,006
1927	372,815	36,769
1928	428,014	42,863
1929	602,097	62,966

Seed, Canary

	Pounds.	Dollars.
1871	2,226,560	56,952
1881	3,037,620	86,838
1891	7,711,060	122,671
1901	3,731,800	67,791
1913	6,219,623	184,596
1914	4,503,280	190,530
1915	4,911,298	208,835
1916	5,368,551	181,898
1917	4,909,107	166,774
1918	3,242,223	201,469
1919	3,953,049	406,883
1920	7,084,523	538,554
1921	5,596,315	255,175
1922	8,255,957	254,394
1923	9,936,544	319,151
1924	9,654,355	370,409
1925	11,929,399	579,531
1926	12,604,143	656,252
1927	14,915,813	467,393
1928	15,396,037	431,278
1929	16,403,823	583,215

Seed, Caraway

	Pounds.	Dollars.
1871	.....	.....
*1881	1,801,860	113,387
1891	1,606,501	49,542
1901	1,281,382	53,808
1913	3,691,831	77,273
1914	1,909,300	234,294
1915	2,895,418	107,599
1916	2,978,581	172,742
1917	505,804	280,146
1918	635,677	71,745
1919	579,599	247,499
1920	2,475,082	204,493
1921	2,443,550	315,846
1922	3,707,392	154,389
1923	3,135,176	203,568
1924	2,418,014	394,054
1925	5,578,562	513,659
1926	4,511,279	519,323
1927	5,007,907	268,900
1928	4,328,645	373,426
1929	4,966,410	338,941

* Includes "Coriander."

Seed, Cardamom

	Pounds.	Dollars.
1871	5,557	13,932
1881	42,456	66,079
1891	41,399	21,945
1901	60,252	32,305
1913	113,461	104,287
1914	80,782	72,148
1915	152,679	106,180
1916	225,687	119,162
1917	214,464	88,605
1918	253,328	108,505
1919	139,808	70,114
1920	210,871	107,507
1921	190,312	101,581
1922	245,815	77,487
1923	318,368	70,847
1924	140,709	123,105
1925	162,472	219,892
1926	151,052	200,675
1927	170,611	182,273
1928	236,472	219,500
1929	219,506	221,451

Seed, Castor

(See Castor Beans)

Seed, Celery

	Pounds.	Dollars.
1914	405,738	86,809
1915	639,673	117,475
1916	607,581	161,839
1917	755,532	142,164
1918	167,684	65,563
1919	318,544	182,810
1920	938,027	314,160
1921	386,786	50,377
1922	763,906	139,273
1923	418,495	132,723
1924	610,923	141,326
1925	557,720	168,026
1926	1,152,003	232,311
1927	870,508	142,534
1928	710,395	112,453
1929	952,436	148,688

Seed, Coriander

	Pounds.	Dollars.
1871	45,189	2,574
*1881	.....	.....
1891	.....	.....
1901	655,382	17,092
1913	1,324,735	35,817
1914	1,238,430	46,158
1915	1,496,288	36,851
1916	1,587,923	54,870
1917	1,111,127	124,098
1918	1,829,183	255,279
1919	2,325,578	215,858
1920	2,179,989	94,996
1921	472,239	13,643
1922	1,986,314	77,314
1923	1,988,895	158,850
1924	1,320,218	92,651
1925	1,747,654	68,474
1926	1,713,613	86,775
1927	1,607,848	54,029
1928	1,344,755	91,755
1929	2,482,735	104,315

* Included in "Caraway."

Seed, Cotton

	Pounds.	Dollars.
1901	1,979,718	7,206
1914	8,891,303	66,085
1915	22,724,868	114,983
1916	30,113,684	251,568
1917	53,362,927	932,335
1918	35,435,460	1,047,657
1919	62,965,821	1,308,493
1920	59,906,975	1,687,974
1921	89,458,235	649,138
1922	59,937,765	518,406
1923	56,236,520	438,095
1924	166,089,886	1,482,411
1925	72,695,800	915,070
1926	87,292,542	1,098,097
1927	31,678,171	444,449
1928	50,244	969
1929	994,122	13,715

Seed, Cumin

	Pounds.	Dollars.
1871	1,065	180
*1881	.....	.....
*1891	496,723	12,097
*1901	1,090,261	22,744
1913	529,667	27,178
1914	530,550	31,709
1915	694,344	83,534
1916	1,446,006	225,672
1917	1,159,598	207,012
1918	1,520,691	198,855
1919	971,982	117,217
1920	1,836,564	167,292
1921	788,493	49,812
1922	1,126,887	103,796
1923	580,929	104,310
1924	683,313	130,671
1925	576,616	90,025
1926	666,136	70,830
1927	386,382	26,386
1928	390,900	40,760
1929	689,506	64,850

* Includes "Fenugreek."

Seed, Fennel

	Pounds.	Dollars.
1871	6,643	562
1881	150,062	9,313
1891	.....	.....
1901	107,523	6,918
1913	187,665	14,410
1914	207,135	12,299
1915	293,810	13,622
1916	312,927	20,751
1917	443,704	48,497
1918	218,091	24,133
1919	160,584	20,412
1920	262,522	34,965
1921	143,594	17,468
1922	222,650	19,479
1923	436,278	43,421
1924	393,168	40,680
1925	243,426	19,457
1926	236,022	19,962
1927	220,504	19,324
1928	214,481	31,636
1929	395,997	50,851

Seed, Fenugreek

	Pounds.	Dollars.
1871	16,457	571
1913	1,944,407	37,434
1914	1,619,230	29,601
1915	1,434,826	30,295
1916	811,270	20,672
1917	1,052,843	71,102
1918	851,532	80,504
1919	1,673,229	131,996
1920	1,043,036	44,168
1921	746,386	17,995
1922	207,192	4,932
1923	1,112,671	42,920
1924	575,009	23,524
1925	771,179	27,581
1926	941,167	27,352
1927	1,028,332	26,315
1928	1,160,459	35,676
1929	858,119	29,290

Seed, Flax

	Bushels (56 lbs.).	Dollars.
1871	4,113,586	5,977,926
1881	4,787,466	1,126,370
1891	1,479,239	1,629,901
1901	1,533,997	1,965,913
1913	5,274,922	8,118,319
1914	8,652,022	10,571,656
1915	10,373,902	12,983,548
1916	14,637,543	20,151,633
1917	12,484,859	25,295,231
1918	12,785,034	33,830,735
1919	8,433,426	22,643,803
1920	23,367,328	76,741,019
1921	16,168,523	39,132,998
1922	13,630,598	26,018,260
1923	24,988,621	50,399,196
1924	19,593,921	36,461,900
1925	13,419,147	31,328,431
1926	19,353,747	38,460,574
1927	24,136,253	42,921,722
1928	18,143,878	32,007,528
1929	22,859,314	40,948,584

Seed, Flax, Screenings

	Pounds.	Dollars.
1914	.....	4,748
1915	.....	673
1916	.....	4,506
1917	.....	2,052
1918	.....	37,818
1919	13,970,091	84,207
1920	31,055,762	183,710
1921	25,993,195	105,630
1922	18,320,345	46,247
1923	26,908,796	64,995
1924	18,333,694	46,369
1925	16,949,564	94,299
1926	18,259,278	47,294
1927	15,265,166	40,503
1928	7,974,870	28,456
1929	15,706,700	45,516

Seed, Hemp

	Pounds.	Dollars.
1871	857,396	28,224
1881	1,324,355	26,403
1891	3,558,146	73,409
1901	1,769,375	36,336
1913	2,347,979	44,483
1914	2,031,438	38,315
1915	2,591,026	39,992
1916	4,036,614	63,163
1917	5,355,921	110,176
1918	449,772	12,232
1919	760,353	26,395
1920	5,194,599	264,652
1921	3,763,970	82,245
1922	2,925,317	63,566
1923	4,055,649	88,983
1924	3,629,497	89,121
1925	3,608,887	90,497
1926	4,094,427	112,294
1927	5,337,796	130,183
1928	4,127,717	102,797
1929	4,931,816	137,065

Seed, Mustard, Whole

	Pounds.	Dollars.
1871	1,608,270	103,192
1881	1,157,832	63,240
1891	2,871,660	92,052
1901	4,489,206	159,993
1913	12,719,682	417,370
1914	11,543,941	370,964
1915	10,157,934	543,586
1916	16,402,112	1,070,567
1917	0,962,122	776,546
1918	13,035,527	683,096
1919	11,272,770	842,033
1920	14,817,829	1,510,783
1921	4,618,253	253,903
1922	12,490,026	487,569
1923	12,958,622	562,494
1924	14,586,459	634,418
1925	11,253,678	671,912
1926	15,442,561	978,226
1927	23,923,948	1,317,362
1928	13,720,659	727,103
1929	15,521,363	861,275

Imports Into the United States

Seed, Pepper

	Pounds.	Dollars.
1913	10,414	4,579
1914	11,536	4,879
1915	15,324	6,379
1916	14,900	6,202
1917	4,962	2,846
1918	21,884	15,964
1919	7,022	11,042
1920	1,907	2,159
1921	5,376	4,301
1922	7,275	5,527
1923	**3,335**	**3,002**
1924	808	472
1925	3,733	2,367
1926	**5,901**	**3,503**
1927	2,318	1,808
1928	4,335	2,987
1929	2,990	2,419

Seed, Perilla and Sesame

	Pounds.	Dollars.
1924	13,463,311	637,866
1925	4,772,272	279,180
1926	**1,783,243**	**91,674**
1927	3,403,041	187,375
1928	6,675,611	323,034
1929	18,878,746	834,306

Seed, Poppy

	*Pounds.	Dollars.
1891	5,323	13,108
1901	22,686	37,440
1913	77,396	237,069
1914	56,322	126,744
1915	52,899	172,018
1916	26,648	176,776
1917	3,878	25,563
1918	130,024	215,840
1919	11,320	29,206
1920	33,745	363,369
1921	86,096	476,246
1922	94,637	388,644
1923	**105,587**	**640,399**
1924	4,802,196	419,410
1925	6,045,993	551,117
1926	**3,356,570**	**375,609**
1927	5,373,243	531,915
1928	6,606,276	562,488
1929	7,027,762	520,529

* Quantity stated in "Bushels" prior to 1924.

Seed, Rape

	Pounds.	Dollars.
1871	145,323	6,450
1881	531,412	19,986
1891	891,441	19,681
1901	1,702,504	71,527
1913	4,308,750	169,634
1914	5,970,937	211,301
1915	5,194,132	230,280
1916	9,977,353	311,212
1917	4,819,360	186,877
1918	12,673,276	741,810
1919	742,780	43,935
1920	6,905,051	456,402
1921	4,934,014	277,547
1922	5,892,308	267,330
1923	**7,117,384**	**326,711**
1924	7,415,458	324,314
1925	5,094,289	260,992
1926	**8,128,081**	**435,945**
1927	8,084,394	388,034
1928	8,336,534	376,167
1929	9,330,713	466,523

Seed, Soya (Beans)

	Pounds.	Dollars.
1914	1,929,435	49,507
1915	3,837,865	87,306
1916	3,003,065	78,963
1917	5,334,334	132,572
1918	31,805,997	692,964
1919	3,203,203	145,996
1920	4,022,552	213,696
1921	4,661,458	190,674
1922	3,111,866	118,953
1923	**3,605,736**	**148,428**
1924	3,957,903	152,533
1925	3,860,406	143,882
1926	**4,010,491**	**163,881**
1927	3,884,319	150,509
1928	4,468,000	169,335
1929	4,128,760	156,843

Seed, Sunflower

	Pounds.	Dollars.
1924	2,936,924	86,607
1925	781,421	19,777
1926	**176,263**	**4,815**
1927	398,107	14,321
1928	2,375,855	79,806
1929	1,963,850	104,140

Seed, Worm, Levant

	Pounds.	Dollars.
1924	2,131	4,440
1925	2,967	2,596
1926	**4,669**	**8,028**
1927	4,563	6,028
1928	1,723	3,566
1929	1,563	4,434

Selenium and Its Salts

	Pounds.	Dollars.
1914	.....	363
1915	.....	43
1916	.....	16
1917	.....	302
1918	.....	2,236
1919	.....	.....
1920	114	25,866
1921	1,104	2,092
1922	1,654	2,534
1923	**935**	**1,636**
1924	305	626
1925	2,227	3,726
1926	**11,450**	**20,934**
1927	17,908	33,427
1928	17,611	32,521
1929	12,097	21,634

Senna

	Pounds.	Dollars.
1891	.....	51,876
1901	.....	91,884
1913	2,634,117	150,555
1914	2,454,772	173,054
1915	2,180,288	209,313
1916	2,794,400	361,881
1917	5,116,315	844,733
1918	3,575,068	771,067
1919	2,554,069	628,852
1920	3,425,200	572,419
1921	2,780,666	349,839
1922	1,946,635	191,53°
1923	**3,130,187**	**244,169**
1924	2,968,361	281,008
1925	3,194,109	277,873
1926	**3,072,449**	**198,138**
1927	3,144,228	214,923
1928	2,959,155	195,710
1929	2,612,870	184,942

Sheep Dip

	Pounds.	Dollars.
1891	.....	893
1901	.....	59,016
1913	.....	63,527
1914	.....	16,842
1915	.....	32,963
1916	.....	21,198
1917	.....	17,185
1918	.....	26,989
1919	88,335	6,958
1920	172,562	13,880
1921	53,450	5,240
1922	10,377	1,480
1923	**103,952**	**6,549**
1924	92,509	6,781
1925	120,532	10,351
1926	96,988	9,493
1927	125,525	13,485
1928	136,200	13,755
1929	187,603	20,055

Siennas, Crude, Not Ground

	Pounds.	Dollars.
1891	1,147,282	24,070
1901	795,996	14,624
1914	6,489,329	55,925
1915	6,656,031	64,658
1916	5,206,292	83,428
1917	2,990,972	61,163
1918	2,731,181	61,301
1919	2,060,857	48,237
1920	2,555,705	76,715
19**	5,111,832	150,857
1922	2,590,299	102,534
1923	**2,867,886**	**103,713**
1924	1,555,650	46,733
1925	1,632,544	41,194
1926	**1,935,778**	**48,837**
1927	1,745,802	43,321
1928	**1,485,390**	**39,771**
1929	1,456,481	46,665

Silica for Use as Pigment

	Tons.	Dollars.
1927	24	149
1928	20	535
1929	.....	9

Silver Leaf

	*Leaves.	Dollars.
1871	1,160	5,500
1881	250	919
1891	1	15
1901	30	85
1913	17,130	2,122
1914	34,070	4,353
1915	31,298	3,718
1916	6,445	802
1917	1,125	135
1918	1,750	382
1919	.....	.....
1920	3,855	1,334
1921	8,630	3,446
1922	4,412	741
1923	**4,475**	**837**
1924	3,700	1,171
1925	381,000	1,284
1926	**949,500**	**2,487**
1927	725,000	2,240
1928	425,000	964
1929	1,460,000	3,912

* Quantity stated in 100 leaves prior to 1925.

Slag, Basic, for Fertilizers

	Tons.	Dollars.
1913	5,124	146,477
1914	9,509	108,565
1915	561	7,309
1916	81	1,031
1917	41	549
1918	2	54
1919	117	2,305
1920	22	689
1921	.....	.....
1922	33	938
1923	**487**	**12,218**
1924	495	7,679
1925	464	6,946
1926	**153**	**2,335**
1927	1,186	13,597
1928	2,302	27,868
1929	4,002	51,020

Soap Bark or Quillaya

	Pounds.	Dollars.
1924	332,356	18,917
1925	139,589	7,796
1926	569,535	25,972
1927	426,402	23,222
1928	361,067	27,911
1929	182,452	15,043

Soap, Castile

	Pounds.	Dollars.
1901	3,842,827	245,876
1914	4,604,995	368,310
1915	4,067,921	341,107
1916	3,245,550	335,580
1917	2,390,356	306,126
1918	1,027,148	147,286
1919	955,088	143,906
1920	2,170,294	380,981
1921	2,039,498	310,015
1922	2,289,479	289,635
1923	**1,827,204**	**199,626**
1924	1,575,001	167,892
1925	1,848,192	229,673
1926	**1,876,440**	**230,451**
1927	2,106,694	286,228
1928	2,918,808	407,444
1929	3,381,017	422,207

Soap, Medicated

	Pounds.	Dollars.
1914	74,132	29,306
1915	32,048	14,082
1916	16,455	3,523
1917	4,287	1,975
1918	16,844	7,412
1919	9,745	8,853
1920	10,217	4,568
1921	20,338	16,198
1922	29,183	9,193
1923	**32,891**	**4,773**
1924	32,364	8,143
1925	15,831	3,933
1926	**65,774**	**13,365**
1927	21,677	7,530
1928	116,975	12,506
1929	15,487	7,157

Soap, Toilet, Perfumed

	Pounds.	Dollars.
1871	.....	76,499
1881	.....	77,312
1891	.....	281,255
1901	.....	413,819
1914	.....	248,194
1915	.....	193,646
1916	.....	147,819
1917	.....	184,613
1918	.....	125,275
1919	137,301	113,996
1920	242,632	153,638
1921	363,900	227,624
1922	648,243	283,514
1923	**601,134**	**241,129**
1924	850,755	281,507
1925	869,019	328,841
1926	**1,015,602**	**361,558**
1927	1,191,446	439,709
1928	1,600,054	545,971
1929	1,843,920	578,116

Soap, Toilet, Unperfumed

	Pounds.	Dollars.
1871	.....	223,061
1881	.....	175,439
1891	.....	251,955
1914	.....	100,650
1915	.....	140,048
1916	.....	82,057
1917	.....	64,570
1918	.....	13,635
1919	39,151	12,110
1920	67,944	17,600
1921	85,635	18,001
1922	625,098	108,442
1923	**442,499**	**85,943**
1924	133,321	28,007
1925	166,410	37,709
1926	**101,145**	**22,266**
1927	192,214	43,801
1928	200,270	34,086
1929	182,754	35,767

Soaps, All Other

	Pounds.	Dollars.
1891	.....	45,56
1901	.....	14,47
1914	.....	84,745
1915	.....	53,940
1916	.....	18,245
1917	.....	21,406
1918	.....	31,639
1919	151,526	15,038
1920	198,233	22,189
1921	341,480	36,479
1922	498,572	57,539
1923	**1,952,481**	**214,249**
1924	2,084,451	209,065
1925	2,371,781	267,069
1926	**2,633,859**	**293,555**
1927	2,478,859	264,151
1928	1,596,875	168,336
1929	1,527,385	180,550

Soda Acetate

	Pounds.	Dollars.
1924	119,903	5,116
1925	403,451	15,534
1926	**537,327**	**25,950**
1927	955,574	59,701
1928	1,534,125	64,763
1929	649,137	39,527

Soda Arsenate

	Pounds.	Dollars.
1901	74,614	2,122
1914	228,270	8,267
1915	85,850	3,138
1916	36,176	3,436
1917	23,296	2,404
1918	35	88
1919	.....	.....
1920	11,448	1,118
1921	131,915	11,946
1922	14,146	1,122
1923	**2,671**	**380**
1924	21,168	2,315
1925	16,217	1,559
1926	**145,452**	**9,613**
1927	92,655	5,468
1928	11,012	644
1929	24,048	1,502

Soda Ash (Carbonate, Calcined)

	Pounds.	Dollars.
1871	145,428,215	2,387,583
1881	295,227,766	4,154,258
1891	326,099,239	4,122,700
1901	34,443,555	306,982
1913	3,100,790	35,461
1914	2,228,991	28,106
1915	2,127,542	29,022
1916	878,175	20,718
1917	1,047,295	29,239
1918	1,514,765	55,231
1919	.....	.....
1920	1,926,332	39,437
1921	6,630,873	93,802
1922	17,944,667	242,688
1923	**1,529,334**	**22,556**
1924	1,854,511	21,151
1925	259,586	6,203
1926	140,585	7,362
1927	108,112	4,910
1928	75,508	2,696
1929	12,327,338	149,695

Soda Benzoate

	Pounds.	Dollars.
1914	190	97
1915	40,903	19,183
1916	35,188	100,195
1917	80,755	339,868
1918	1,569	4,742
1919	55,188	11,459
1920	67,397	10,478
1921	1,032	10,122
1922	11,369	3,001
1923	.....	.....
1924	.....	.....
1925	110	43
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	4,400	1,192

Soda Bicarbonate

	Pounds.	Dollars.
1871	18,998,399	421,177
1881	1,951,851	58,312
1891	758,612	15,611
1901	144,182	5,006
1913	80,699	2,238
1914	88,873	2,324
1915	93,318	2,584
1916	129,414	2,867
1917	34,742	1,821
1918	29,444	944
1919	12,665	711
1920	13,353	3,514
1921	5,960	417
1922	357,216	5,627
1923	**47,415**	**1,470**
1924	7,396	466
1925	11,244	702
1926	20,925	1,345
1927	62,348	2,185
1928	81,389	3,948
1929	2,780	307

Soda Bisulphate (Niter Cake)

	Pounds.	Dollars.
1924	55,126	1,043
1925	1,067	55
1926	53	8
1927	4,620	271
1928	.....	.....
1929	44,487	443

Soda Bisulphite, Meta-Bisulphite

	Pounds.	Dollars.
1924	122,843	3,918
1925	366,715	10,452
1926	561,179	15,640
1927	1,773,354	44,947
1928	1,634,775	38,784
1929	1,790,234	41,068

Soda Borate

(See Borax, Refined)

Soda Bromide

	Pounds.	Dollars.
1924	168,232	13,826
1925	754,159	139,894
1926	81,760	24,204
1927	170,857	61,309
1928	.....	.....
1929	110	51

Soda Carbonate, Crystal

	Pounds.	Dollars.
1871	28,637,489	281,892
1881	.....	.....
1891	.....	.....
1901	611,961	5,663
1913	169,174	2,928
1914	307,488	3,323
1915	144,452	2,748
1916	49,231	650
1917	60,464	1,299
1918	70,116	2,028
1919	.....	.....
1920	203	16
1921	74,271	2,266
1922	16,042	623

Not stated after 1922; see Soda, Hydrated.

Soda, Caustic

(See Soda Hydroxide)

Soda Chlorate

	Pounds.	Dollars.
1891	385,972	51,502
1901	795,659	44,173
1913	50	10
1914	469	84
1915	62	6
1916	22,176	3,105
1917	33,600	1,080
1918	44,800	8,064
1919	10	2
1920	424,280	38,973
1921	365,611	26,397
1922	1,031,351	46,910
1923	**1,612,958**	**64,104**
1924	732,967	28,226
1925	813,168	30,252
1926	**1,485,980**	**52,981**
1927	1,703,094	60,758
1928	1,959,493	60,758
1929	5,578,535	212,686

Soda Chromate and Bichromate

	Pounds.	Dollars.
1901	54,105	2,781
1913	9	3
1914	11,056	585
1915	.....	.....
1916	6,154	3,630
1917	.....	.....
1918	27,127	5,259
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	86,608	6,794
1923	**527**	**108**
1924	77	19
1925	50	10
1926	**171**	**36**
1927	56,011	1,495
1928	380	96
1929	1,592	241

Soda Cyanide

	Pounds.	Dollars.
1914	7,856,611	1,120,789
1915	6,187,418	955,907
1916	684,198	115,186
1917	1,875,824	861,777
1918	84,632	39,405
1919	138,970	13,406
1920	8,629,502	729,514
1921	7,733,063	1,074,434
1922	14,328,817	1,237,622
1923	**25,454,043**	**2,130,404**
1924	29,623,886	2,448,882
1925	28,362,771	2,593,074
1926	**30,648,908**	**2,551,080**
1927	32,377,820	2,587,336
1928	31,102,262	2,420,369
1929	39,476,654	3,065,709

Soda, Fluoride

	Pounds.	Dollars.
1927	990,978	56,104
1928	1,162,155	65,275
1929	1,187,841	85,689

Soda Formate

	Pounds.	Dollars.
1927	40,603	2,565
1928	20,212	1,179
1929	.....	.....

Soda, Hydrated, Sal Soda

	Pounds.	Dollars.
1871	28,637,489	281,892
1881	15,695,044	119,793
1891	38,548,379	252,051
1901	5,169,275	22,779
1913	128,027	1,010
1914	163,626	1,274
1915	104,800	606
1916	67,210	334
1917	50	4
1918	75	3
1919	44,800	1,156
1920	5,056	603
1921	45,360	1,390
1922	23,419	262
1923	**12,500**	**1,752**
1924	60	6
1925	30,123	2,281
1926	**46,518**	**1,602**
1927	13,660	439
1928	35,168	1,001
1929	488	90

Soda Hydroxide (Caustic)

	Pounds.	Dollars.
1871	27,952,469	877,710
1881	49,465,385	1,168,277
1891	76,788,411	1,821,127
1901	3,749,633	75,954
1913	671,480	25,364
1914	665,320	25,914
1915	444,185	19,318
1916	225,189	20,981
1917	109,983	21,052
1918	15,976	9,591
1919	2	2
1920	117,322	14,842
1921	67,950	7,766
1922	1,548,020	70,559
1923	**118,300**	**12,027**
1924	42,989	4,417
1925	70,905	8,815
1926	**55,607**	**7,441**
1927	207,819	35,937
1928	47,122	10,126
1929	157,978	20,144

Imports Into the United States

Soda Hydrosulphite and Compounds

	Pounds.	Dollars.
1901	5,222,369	50,639
1913	7,299	228
1914	926,135	128,828
1915	1,855,223	288,693
1916	5,125	166
1917	1,836	1,198
1918	6,960	6,723
1919	27,616	6,112
1920	11,014	7,904
1921	6,160	4,085
1922	1,717,653	32,617
1923	674,131	85,276
1924	447,893	83,307
1925	420,253	88,329
1926	216,172	47,772
1927	225,231	52,135
1928	285,686	51,007
1929	289,605	54,453

Soda Nitrate

	Tons.	Dollars.
1871	25,145	1,254,961
1881	49,171	2,356,167
1891	104,813	2,929,760
1901	197,518	5,656,442
1913	586,315	20,713,375
1914	554,048	17,926,165
1915	575,371	16,240,510
1916	1,072,833	32,129,926
1917	1,261,993	44,428,196
1918	1,608,569	70,077,674
1919	1,410,714	68,229,548
1920	907,141	40,314,969
1921	853,756	42,322,979
1922	303,271	14,067,468
1923	897,198	43,062,754
1924	951,904	45,649,327
1925	1,104,808	51,952,270
1926	1,020,444	47,444,919
1927	646,869	28,891,712
1928	1,093,761	49,208,362
1929	962,762	35,110,524

Soda Nitrite

	Pounds.	Dollars.
1901	90,125	4,642
1913	1,269,544	57,595
1914	1,844,379	76,813
1915	1,696,567	74,263
1916	2,593,330	170,160
1917	3,675,179	261,555
1918	2,755,033	226,294
1919	1,746,976	159,355
1920	8,897,758	978,676
1921	6,721,107	791,611
1922	1,372,768	70,813
1923	5,106,678	218,573
1924	4,939,081	202,570
1925	1,396,429	58,282
1926	2,834,837	104,457
1927	477,625	16,976
1928	142,337	5,313
1929	206,435	8,024

Soda Phosphate

	Pounds.	Dollars.
1901	377,834	7,178
1913	30	12
1914	1,364,789	24,975
1915	485,300	7,765
1916	1,066	79
1917	1,561	521
1918	112	69
1919	.....	.....
1920	56	22
1921	238,416	8,113
1922	1,968,739	57,345
1923	1,096,392	32,136
1924	2,282,738	58,803
1925	2,081,753	47,596
1926	7,113,225	183,109
1927	13,615,618	317,923
1928	16,545,318	379,230
1929	21,300,088	491,234

Soda Prussiate Yellow (Ferrocyanide)

	Pounds.	Dollars.
1913	1,887,369	118,475
1914	2,295,724	171,834
1915	1,529,958	120,477
1916	527,130	136,250
1917	175,980	96,592
1918	.....	.....
1919	274,441	99,899
1920	2,633,090	445,849
1921	1,610,036	282,966
1922	3,832,491	473,065
1923	2,810,443	498,353
1924	1,789,868	68,687
1925	2,685,634	212,145
1926	1,254,551	85,207
1927	1,295,563	101,884
1928	1,921,418	157,524
1929	1,276,887	111,317

Soda Silicate (Water Glass)

	Pounds.	Dollars.
1871	384,882	7,325
1881	557,251	8,367
1891	535,030	6,429
1901	1,229,857	10,461
1913	1,032,113	9,400
1914	1,046,569	10,881
1915	1,587,902	16,292
1916	1,567,617	18,694
1917	1,203,844	18,493
1918	707,583	12,734
1919	673,777	16,647
1920	754,923	19,479
1921	1,069,468	32,033
1922	315,902	10,135
1923	1,050,735	25,187
1924	384,683	7,248
1925	243,561	6,949
1926	224,716	4,701
1927	203,317	4,003
1928	109,664	2,279
1929	299,209	6,327

Soda, Silicofluoride or Fluosilicate

	Pounds.	Dollars.
1927	3,242,041	102,476
1928	3,529,084	99,057
1929	4,121,654	197,437

Soda Sulphate, Anhydrous

	Tons.	Dollars
1924	55	1,671
1925	131	5,262
1926	592	17,036
1927	2,115	56,800
1928	2,623	65,283
1929	3,869	93,842

Soda Sulphate, Crude (Salt Cake)

	*Pounds.	Dollars.
1871	.....	2,436
1881	698	8,187
1891	8,457	85,368
1901	3,412	34,645
1913	189	4,771
1914	206	2,436
1915	189	3,566
1916	91	6,392
1917	216	4,122
1918	463	8,382
1919	28	168
1920	.....	.....
1921	152	2,855
1922	189	5,904
1923	3,208	46,712
1924	9,216,939	73,497
1925	4,092,950	18,239
1926	8,222,185	49,143
1927	16,207,970	76,222
1928	37,239,231	164,551
1929	125,181,318	549,736

* Quantity stated in tons prior to 1924.

Soda, Sulphate, Crystalized

(See Glauber's Salt)

Soda Sulphide

	Pounds.	Dollars.
1913	951,664	13,068
1914	2,529,911	36,383
1915	1,263,366	18,228
1916	80,513	4,616
1917	344,617	7,214
1918	117,532	1,707
1919	314,887	10,494
1920	2,008,495	64,678
1921	741,965	40,440
1922	8,916,743	261,210
1923	16,502,750	449,588
1924	5,234,701	154,897

Stated separately after 1924.

Soda Sulphide, Containing Not More Than 35% Sodium

	Pounds.	Dollars.
1925	593,786	14,334
1926	737,738	19,794
1927	824,755	18,169
1928	514,758	11,582
1929	1,024,988	20,039

Soda Sulphide, Containing More Than 35% Sodium

	Pounds.	Dollars.
1925	1,953,060	47,730
1926	5,684,410	118,481
1927	8,706,410	173,573
1928	10,011,741	201,346
1929	8,086,664	146,902

Soda Sulphite

	Pounds.	Dollars.
1913	27,152	400
1914	382,540	5,627
1915	165,594	4,316
1916	435	60
1917	68,224	1,221
1918	20,206	223
1919	11,400	1,007
1920	68,239	3,119
1921	206,423	5,949
1922	2,585,868	73,357
1923	2,014,699	73,550
1924	880,699	19,808
1925	413,799	12,318
1926	609,072	17,483
1927	964,286	27,946
1928	907,690	28,445
1929	1,249,678	36,067

Soda, Sulphydrate

	Pounds.	Dollars.
1927	2,631,669	65,209
1928	296,357	6,923
1929	.....	.....

Soda Sulphoxlyate Compounds

	Pounds.	Dollars.
1924	22,456	546
1925	6,052	1,640
1926	4,365	979
1927	.....	.....
1928	648	160
1929	.....	.....

Soda Thiosulphate

	Pounds.	Dollars.
1924	797,621	11,893
1925	221,280	3,693
1926	71,296	1,445
1927	131,714	2,446
1928	33,737	652
1929	42,863	1,041

Sodium

	Pounds.	Dollars.
1920	5,600	684
1921	.....	.....
1922	418,997	64,976
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Sodium Compounds N. E. S.

	Pounds.	Dollars.
1928	396,078	48,823
1929	449,088	38,144

Spiegeleisen

	Tons.	Dollars.
1919	27	1,018
1920	3,312	175,969
1921	2,127	109,140
1922	2,204	75,412
1923	10,442	343,268
1924	5,387	161,713
1925	4,423	124,650
1926	5,275	152,740
1927	8,216	243,195
1928	4,189	118,849
1929	15,148	436,692

Spirits, Distilled

	Proof gallons.	Dollars.
1927	538	2,439
1928	1,563	6,944
1929	308	1,242

Sponges

		Dollars.
1871	.....	113,127
1881	.....	229,292
1891	.....	381,879
1901	.....	540,223
1912	.....	311,547
1913	.....	289,909

Includes manufactures of prior to 1914.
Stated separately after 1913.

Sponges

	Pounds.	Dollars.
1914	.....	279,211
1915	.....	334,252
1916	.....	454,626
1917	.....	593,253
1918	.....	510,374
1919	.....	475,817
1920	.....	607,440
1921	.....	459,231
1922	.....	563,092
1923	.....	787,896
1924	1,419,389	787,081
1925	1,037,563	751,355
1926	971,772	950,775
1927	191,214	237,955
1928	941,868	1,144,258
1929	852,203	1,081,455

Sponges, Manufactures of, N. E. S.

	Pounds.	Dollars.
1914	.....	38,300
1915	.....	42,042
1916	.....	58,797
1917	.....	55,077
1918	.....	27,682
1919	.....	8,053
1920	.....	24,212
1921	.....	37,219
1922	.....	34,245
1923	.....	22,346
1924	2,193	7,192
1925	1,451	3,409
1926	2,613	3,799
1927	766	845
1928	4,927	6,535
1929	6,600	3,988

Starch, Potato

	Pounds.	Dollars.
1871	7,571	658
1881	35,896	2,124
1891	.....	.....
1901	.....	.....
1913	14,180,856	375,713
1914	13,934,741	233,661
1915	10,941,257	253,859
1916	2,237,717	72,736
1917	17,545,689	797,327
1918	13,195,079	902,499
1919	11,913,821	974,892
1920	9,017,574	547,672
1921	10,801,488	466,652
1922	7,156,786	319,174
1923	10,852,328	331,523
1924	11,271,952	353,917
1925	8,745,680	339,648
1926	15,349,232	521,152
1927	24,255,730	835,524
1928	23,055,228	857,808
1929	19,776,977	596,283

Starch, Rice

	Pounds.	Dollars.
1924	165,878	8,567
1925	146,451	13,367
1926	313,069	15,817
1927	323,054	18,712
1928	303,581	16,690
1929	419,956	23,095

Starch, Soluble or Chemically Treated

	Pounds.	Dollars.
1913	321,071	13,345
1914	1,697,392	54,604
1915	569,297	21,559
1916	7,420	417
1917	44,788	3,244
1918	.....	.....
1919	1,223	143
1920	.....	.....
1921	143,153	10,492
1922	221,259	13,713
1923	364,247	16,633
1924	397,371	16,715
1925	977,372	43,352
1926	1,132,824	56,454
1927	1,102,530	56,215

Not stated separately after 1927.

Starch, Wheat

	Pounds.	Dollars.
1924	25,851	1,146
1925	33,069	1,670
1926	27,116	1,482
1927	44,092	2,343
1928	28,867	1,658
1929	48,364	2,368

Starch, All Other (Except Cornstarch)

	Pounds.	Dollars.
1871	25,078	1,896
1881	1,108,319	33,354
1891	3,743,219	86,694
1901	6,753,103	144,861
1913	677,785	40,641
1914	962,314	52,166
1915	952,934	52,537
1916	1,242,918	78,838
1917	888,345	62,132
1918	590,469	67,355
1919	224,938	35,537
1920	1,024,662	109,003
1921	474,700	54,871
1922	602,905	56,949
1923	337,446	27,412
1924	515,635	44,133
1925	395,126	52,274
1926	1,244,766	80,955
1927	1,865,279	100,806
1928	1,452,216	96,802
1929	722,378	43,170

Stearin, Vegetable, see "Candle Pitch, Etc."

Stramonium

	Pounds.	Dollars.
1924	190,035	7,020
1925	148,552	6,256
1926	175,404	11,944
1927	344,058	28,149
1928	349,143	30,727
1929	309,742	26,412

Strontianite or Mineral Strontium Carbonate and Celestite or Mineral Strontium Sulphate

	Pounds.	Dollars.
1924	3,473,949	12,872
1925	3,190,208	14,133
1926	3,808,193	46,405
1927	2,817,844	57,559
1928	2,050,051	44,748
1929	1,695,241	35,394

Strontium Carbonate, Precipitated

	Pounds.	Dollars.
1924	13,830	1,388
1925	44,359	1,451
1926	51,481	1,681
1927	32,051	1,630
1928	40,923	2,737
1929	100,514	6,626

Strontium Nitrate

	Pounds.	Dollars.
1924	1,209,974	79,844
1925	2,098,410	120,731
1926	688,913	36,611
1927	1,816,053	101,316
1928	1,530,833	89,393
1929	2,240,587	126,184

Strontium Oxide

	Pounds.	Dollars.
1891	.....	63
1901	.....	1,755
1913	.....	474
1914	.....	1,969
1915	.....	7,268
1916	.....	8,311
1917	.....	21,184
1918	.....	6,873
1919	316,640	1,358
1920	1,050,347	6,230
1921	2,816,726	16,020
1922	.....	.....
1923	23,285	1,143
1924	.....	.....
1925	663	120
1926	4,400	303
1927	2,204	320
1928	.....	.....
1929	4,410	482

Strychnine Alkaloid

	Ounces.	Dollars.
1924	28,835	21,115
1925	33,700	16,245
1926	39,000	15,674
1927	47,500	14,081
1928	50,264	15,236
1929	148,323	52,455

Strychnine Sulphate

	Ounces.	Dollars.
1924	11,291	5,592
1925	16,341	7,094
1926	36,583	14,458
1927	42,000	11,702
1928	.....	.....
1929	21,164	7,250

Strychnine Salts, N. E. S.

	Ounces.	Dollars.
1871	5	12
1881	99	122
1891	230	175
1901	4,731	1,935
1913	366,575	4,112,057
1914	846,905	3,753,879
1915	26,967	11,449
1916	59,278	37,652
1917	33,323	25,617
1918	9,688	9,726
1919	186	862
1920	18,448	32,901
1921	29,029	45,851
1922	104,902	133,271
1923	105,730	136,751
1924	84,367	61,102
1925	64,151	26,688
1926	80,417	34,145
1927	24,008	7,890
1928	1,000	507
1929	7,008	2,599

Sulphur Ore as Pyrites or Sulphuret of Iron, Containing Not in Excess of 25 Percent of Sulphur

	Tons.	Dollars.
1891	19,605	77,694
1901	352,644	1,184,899
1913	532	377
1914	17,419	5,408
1915	26,967	11,449
1916	1,370,059	7,121,614
1917	935,749	5,855,913
1918	807,084	4,526,563
1919	370,272	2,018,447
1920	425,545	2,190,012
1921	263,633	1,299,238
1922	228,067	701,334
1923	826,833	1,744,482
1924	238,358	700,488
1925	281,081	772,264
1926	318,702	766,051
1927	288,749	645,284
1928	373,412	978,499
1929	632,549	1,220,892

Sulphur or Brimstone, Crude

	Tons.	Dollars.
1871	40,699	1,212,448
1881	113,190	2,713,485
1891	119,891	2,465,732
1901	159,710	2,875,115
1913	19,258	374,024
1914	20,236	346,875
1915	25,842	442,975
1916	22,539	372,599
1917	11,819	205,980
1918	282	8,677
1919	75	1,822
1920	51	1,896
1921	3	124
1922	2	141

See "Sulphur and Sulphur Ore" after 1922.

Sulphur, Lac or Precipitated

	Pounds.	Dollars.
1881	.....	775
1891	35,535	2,395
1901	61,357	3,612
1913	715,876	13,723
1914	283,896	13,636
1915	208,568	13,187
1916	217,997	16,628
1917	69,145	7,009
1918	84,224	10,797
1919	39,548	5,897
1920	99,001	16,025
1921	49,306	13,259
1922	21,904	3,352

See "Sulphur and Sulphur Ore" after 1922.

Sulphur, Refined

	Tons.	Dollars.
1871	104	4,328
1881	80	2,555
1891	307	6,579
1901	154	4,115
1913	1,742	41,626
1914	1,523	39,634
1915	1,296	36,275
1916	850	26,778
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	50	2,512
1921	35	2,329
1922	.....	.....

See "Sulphur and Sulphur Ore" after 1922.

Sulphur, Sublimed, or Flowers of

	Tons.	Dollars.
1871	74	3,574
1881	110	4,226
1891	271	8,386
1901	740	20,392
1913	6,104	122,098
1914	599	15,841
1915	950	31,202
1916	200	7,512
1917	295	13,317
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	98	4,004

See "Sulphur and Sulphur Ore" after 1922.

Imports Into the United States

Sulphur and Sulphur Ore

	Tons.	Dollars.
1923	1,810	31,028
1924	1,169	46,086
1925	8	257
1926	146	5,387
1927	1,234	22,688
1928	4,339	22,254
1929	3,762	17,906

Sulphur in Other Forms Not Elsewhere Specified

	Pounds.	Dollars.
1924	*4,878,740	123,018
1925	3,116,288	72,485
1926	333,334	14,398
1927	249,801	23,906
1928	235,403	23,641
1929	731,367	35,146

* Figures for six months ending June 30, 1924.

Sumac Extract

	Pounds.	Dollars.
1891	239,890	77,152
1901	161,317	52,105
1913	1,270,825	44,568
1914	1,463,297	59,022
1915	727,449	35,066
1916	36,003	4,108
1917	161,507	13,944
1918	23,706	2,616
1919	.....	.....
1920	.....	.....
1921	44,049	3,273
1922	37,262	3,875
1923	158,221	14,408
1924	252,508	17,000
1925	73,958	5,541
1926	54,228	5,504
1927	103,801	9,164
1928	138,041	10,025
1929	228,599	16,101

Sumac, Ground

	*Tons.	Dollars.
1891	11,412,307	235,729
1901	9,935,746	179,801
1913	14,112,112	289,255
1914	9,678,719	231,580
1915	12,048,917	294,434
1916	20,411,022	527,102
1917	10,877,008	337,404
1918	10,557,920	355,192
1919	4,128,309	145,286
1920	16,636,562	593,739
1921	2,245,615	62,786
1922	9,155,685	187,335
1923	13,771,493	322,487
1924	3,691	307,498
1925	3,438	402,333
1926	2,647	262,523
1927	3,180	208,634
1928	3,878	205,439
1929	2,728	149,173

* Quantity stated in pounds prior to 1924.

Sumac, Unground

	*Tons.	Dollars.
1871	10,141,787	420,823
1881	13,667,892	409,400
1891	2,953,202	65,892
1901	1,482,822	26,138
1913	621,366	12,420
1914	1,335,566	32,238
1915	1,258,204	32,613
1916	1,131,369	28,164
1917	760,015	27,769
1918	3,619,439	141,063
1919	5,182,736	162,557
1920	4,543,852	161,497
1921	481,491	11,236
1922	3,461,640	81,175
1923	3,991,529	111,079
1924	631	49,963
1925	896	80,703
1926	457	38,721
1927	1,127	70,822
1928	787	38,548
1929	797	43,781

* Quantity stated in pounds prior to 1924.

Talc, Ground, Etc. (Except Toilet Preparations)

	Pounds.	Dollars.
1871	.....	496
1881	.....	18,735
1891	.....	.....
1901	1,138,358	7,574
1913	23,660,095	122,623
1914	32,498,066	173,023
1915	30,434,850	187,871
1916	33,738,067	207,179
1917	34,288,429	238,479
1918	27,550,409	267,265
1919	23,090,219	207,534
1920	36,579,129	365,912
1921	30,653,746	318,058
1922	33,491,507	336,514
1923	39,031,023	396,227
1924	33,290,949	326,074
1925	39,649,972	352,466
1926	43,906,493	402,612
1927	48,313,058	445,578
1928	49,148,880	450,671
1929	57,379,044	497,767

Talc, Steatite and French Chalk, Crude and Unground

	Pounds.	Dollars.
1871	162,982	3,905
1881	.....	.....
1891	.....	.....
1901	.....	.....
1914	2,807,974	23,369
1915	3,478,711	15,322
1916	4,681,165	9,703
1917	3,736,899	11,477
1918	4,721,980	10,528
1919	2,804,000	10,324
1920	2,958,582	10,254
1921	844,150	3,026
1922	420,075	5,845
1923	833,223	15,605
1924	1,161,518	14,495
1925	167,697	4,211
1926	149,412	4,310
1927	785,548	31,305
1928	658,575	26,673
1929	1,670,577	50,611

Tallow, Animal

	Pounds.	Dollars.
1871	69,244	4,606
1881	65,044	4,318
1891	77,557	3,278
1901	84,449	5,108
1913	490,505	41,710
1914	3,371,833	231,924
1915	12,634,594	823,958
1916	4,779,076	396,787
1917	31,136,527	3,106,274
1918	98,176,560	14,365,676
1919	10,808,742	1,408,007
1920	11,251,437	1,665,799
1921	11,762,499	1,388,362
1922	1,405,820	79,702
1923	10,743,853	614,526
1924	2,467,886	194,577

Stated separately after 1924.

Tallow, Beef

	Pounds.	Dollars.
1925	2,592,420	251,341
1926	12,716,398	1,143,383
1927	2,049,847	156,191
1928	18,356,899	1,354,972
1929	19,841,344	1,604,256

Tallow, Mutton

	Pounds.	Dollars.
1925	126,867	9,142
1926	450,014	40,260
1927	234,737	16,638
1928	2,889,250	170,892
1929	799,063	60,450

Tallow, Vegetable

	Pounds.	Dollars.
1924	3,887,486	278,365
1925	7,080,887	538,890
1926	2,705,465	230,073
1927	4,715,479	420,801
1928	7,092,768	467,070
1929	10,399,256	734,206

Tanks, Drums, or Vessels, for Holding Gas, Liquids, or Other Materials

	Number.	Dollars.
1914	.....	459,842
1915	.....	226,911
1916	.....	242,773
1917	.....	234,217
1918	.....	153,716
1919	.....	151,640
1920	.....	385,309
1921	.....	441,371
1922	.....	174,842
1923	.....	315,267
1924	.....	247,990
1925	.....	441,159
1926	.....	306,628
1927	155,621	862,867
1928	125,462	416,465
1929	180,650	654,326

Tanning Extract, Oak

	Pounds.	Dollars.
1921	1,484,032	84,353
1922	496,679	27,557
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Tanning Extract, Wattle

	Pounds.	Dollars.
1924	58,976	1,935
1925	472,028	16,778
1926	222,440	9,208
1927	224,279	9,720
1928	193,571	10,630
1929	589,755	23,264

Tanning Extracts, N. E. S.

	Pounds.	Dollars.
1924	413,324	29,285
1925	553,989	27,888
1926	602,904	34,969
1927	235,883	9,843
1928	206,755	12,252
1929	26,704	1,153

Tanning Materials, Crude, Not Stated Elsewhere.

	Pounds.	Dollars.
1881	.....	560
1891	.....	2,606
1901	.....	46,739
1914	.....	31,595
1915	.....	64,995
1916	.....	270,292
1917	.....	365,596
1918	.....	95,446
1919	13,227,193	332,898
1920	49,008,222	1,092,589
1921	25,764,287	657,162
1922	9,214,918	136,184
1923	6,638,550	94,291
1924	9,940,403	78,625
1925	7,635,131	83,678
1926	4,702,305	32,644
1927	4,790,273	35,571
1928	1,628,937	13,899
1929	607,073	5,410

Tanning Materials, Synthetic, From Coal Tar

	Pounds.	Dollars.
1926	665	1,081
1927	99	336
1928	.....	.....
1929	.....	.....

Tapioca, Tapioca Flour, and Cassava

	Pounds.	Dollars.
1871	.....	62,110
1881	4,857,434	187,983
1891	8,147,585	243,885
1901	17,411,046	430,002
1914	71,304,728	1,590,614
1915	60,080,060	1,324,184
1916	64,838,470	1,992,399
1917	100,517,107	3,506,479
1918	92,351,460	4,734,860
1919	53,379,896	2,618,121
1920	119,740,319	6,848,677
1921	56,975,926	2,757,298
1922	72,224,281	1,956,308
1923	86,594,160	3,257,366
1924	85,173,291	4,108,231

Stated separately after 1924.

Tapioca

	Pounds.	Dollars.
1925	16,277,436	531,036
1926	5,428,692	190,253
1927	26,901,394	1,214,758
1928	21,855,653	726,377
1929	9,828,745	299,785

Tapioca Flour

	Pounds.	Dollars.
1925	93,880,875	3,680,233
1926	98,598,940	3,043,095
1927	65,709,758	1,841,726
1928	114,818,791	2,880,073
1929	140,329,222	3,452,640

Tapers, Fuses, and Time-Burning Chemical Signals

	Dollars.
1926	6,085
1927	5,748
1928	4,090
1929	5,558

Tar, Coal, Crude, and Pitch of

	Barrels.	Dollars.
1891	89,351	236,450
1901	39,062	104,547
1913	14,093	23,691
1914	17,515	25,140
1915	16,391	23,874
1916	19,206	32,635
1917	5,594	10,702

Stated separately after Sept. 8, 1916.

Tar, Coal, Crude

	Barrels.	Dollars.
1891	3,887	11,644
1901	.....	.....
1917	5,864	10,381
1918	10,031	15,603
1919	25,400	42,270
1920	14,439	28,882
1921	29,694	43,318
1922	29,072	57,286
1923	11,881	35,942
1924	13,284	41,058
1925	11,922	33,527
1926	17,140	57,124
1927	11,920	34,499
1928	15,124	49,554
1929	11,685	35,814

Tar, Coal, Pitch

	Barrels.	Dollars.
1891	.....	15,499
1901	.....	.....
1917	7,258	8,146
1918	15,838	32,582
1919	3,293	7,093
1920	6,168	15,425
1921	6,271	20,060
1922	24	153
1923	1,565	5,501
1924	5,756	17,370
1925	1,608	5,788
1926	4,682	16,774
1927	2,531	9,606
1928	3,383	7,536
1929	508	2,445

Tar and Pitch of Wood

	Barrels (280 lbs.)	Dollars.
1871	.....	5,063
1881	.....	7,790
1891	4,319	13,411
1901	1,797	10,414
1914	561	7,946
1915	129	1,551
1916	31	282
1917	631	5,903
1918	51	214
1919	132	215
1920	287	1,860
1921	712	3,677
1922	166	2,225
1923	434	6,754
1924	462	4,147
1925	1,938	18,981
1926	29,163	216,438
1927	25,115	191,266
1928	16,835	119,239
1929	13,917	106,430

Tartar Emetic or Potassium-Antimony Tartrate

	Pounds.	Dollars.
1924	15,145	3,088
1925	5,180	898
1926	.....	.....
1927	16,211	2,905
1928	9,134	1,664
1929	.....	.....

Tea, Impure, Waste, Siftings or Sweepings, for Manufacturing

	Pounds.	Dollars.
1901	.....	25,802
1914	5,213,956	178,302
1915	4,739,208	153,360
1916	4,796,766	201,507
1917	7,626,688	478,326
1918	10,887,595	782,473
1919	4,860,200	371,975
1920	11,076,802	617,592
1921	12,522,860	738,594
1922	2,823,585	120,887
1923	2,805,135	102,062
1924	5,179,370	173,061
1925	6,498,969	248,829
1926	4,209,274	262,688
1927	2,672,396	114,361
1928	4,705,317	182,529
1929	4,665,615	173,151

Terpin Hydrate

	Pounds.	Dollars.
1914	6,929	1,020
1915	4,477	657
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....
1923	443	214
1924	.....	.....
1925	1,250	283
1926	.....	.....
1927	4,470	1,004
1928	17,098	4,309
1929	45,379	10,787

Terra Alba, All Kinds

	Pounds.	Dollars.
1871	.....	133,028
1881	.....	39,983
1891	20,762,212	50,128

Not stated after 1891.

Terra Alba, Not Made from Gypsum or Plaster Rock

	Pounds.	Dollars.
1920	85,200	674
1921	11,200	133
1922	135,600	1,226

Not stated after 1922.

Tetrachloroethane

	Pounds.	Dollars.
1924	263,954	10,427
1925	493,185	17,307
1926	16,536	958
1927	70,173	3,585
1928	53,436	2,937
1929	111,127	5,101

Theobromine and Its Salts

	Pounds.	Dollars.
1924	209	510
1925	440	956

Not stated after 1925.

Thiocarbanilide

	Pounds.	Dollars.
1925	1,496	2,510
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Thorium Nitrate

	Pounds.	Dollars.
1901	12,986	41,663
1913	112,105	212,263
1914	144,413	309,260
1915	78,516	186,385
1916	22,261	63,496
1917	1,877	5,263
1918	.....	.....
1919	.....	.....
1920	15,409	17,503
1921	59,903	103,788
1922	14,745	27,196
1923	34,192	38,840
1924	13,758	14,288
1925	13,248	13,589
1926	34,508	40,285
1927	8,350	11,862
1928	12,590	14,488
1929	9,214	10,858

Thorium Oxide and Other Salts

	Pounds.	Dollars.
1914	2,466	4,075
1915	82	359
1916	2,612	6,092
1917	1,616	3,984
1918	.....	.....
1919	28	124
1920	.....	.....
1921	.....	.....
1922	7,830	12,329
1923	8,953	9,765
1924	.....	.....
1925	583	626
1926	689	778
1927	.....	.....
1928	302	377
1929	388	249

Thyme Leaves, Unground

	Pounds.	Dollars.
1924	85	14
1925	1,592	132
1926	118	36
1927	3,498	221
1928	6,172	712
1929	4,720	474

Thymol.

	Pounds.	Dollars.
1914	19,045	24,765
1915	4,772	12,921
1916	443	1,973
1917	1,759	13,741
1918	34,978	113,279
1919	8,430	75,013
1920	8,948	56,764
1921	9,593	63,326
1922	8,305	30,740
1923	8,148	22,738
1924	10,315	21,548
1925	22,757	62,740
1926	25,336	67,870
1927	22,754	52,183
1928	17,038	31,096
1929	19,531	33,358

Tin Bichloride, Tetrachloride and Other Compounds

	Pounds.	Dollars.
1923	2,451,917	99,402
1924	149,830	8,191
1925	12,846	2,793
1926	92,291	11,727
1927	134,976	44,606
1928	.....	.....
1929	5,193	783

Tin Foil

	Pounds.	Dollars.
1871	.....	29,422
1881	.....	33,456
1891	.....	31,880
1901	.....	48,829
1913	.....	430
1914	.....	649
1915	.....	1,216
1916	.....	1,506
1917	.....	2,283
1918	.....	212
1919	.....	84
1920	.....	465
1921	.....	9,371
1922	.....	3,027
1923	.....	2,961
1924	1,386	570
1925	2,958	2,518
1926	15,307	6,451
1927	19,945	15,137
1928	9,196	5,708
1929	9,634	9,242

Tin Ore, Cassiterite, and Black Oxide

	*Tons.	Dollars.
1871	.....	3,061
1881	.....	2,510
1891	224	7
1901	2,200	540
1913	82,983	18,536
1914	19,549	3,022
1915	49,068	10,798
1916	40,533	8,134
1917	54,867	12,816
1918	20,014	8,914
1919	.....	.....
1920	14	6,924
1921	35	16,025
1922	104	31,378
1923	5,331	2,868,253
1924	950	798,017
1925	212	110,962
1926	301	168,522
1927	154	100,513
1928	132	74,854
1929	105	56,366

* Quantity stated in pounds prior to 1920.

Tin Powder

	Pounds.	Dollars.
1924	5,296	3,441
1925	8,640	6,567
1926	2,953	2,703
1927	1,020	1,033
1928	465	425
1929	1,475	1,302

Titanium

	Pounds.	Dollars.
1921	2,315	1,030
1922	13,686	3,334
1923	16,748	3,509
1924	17,029	3,827
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	.....	.....

Titanium-Potassium Oxalate and Compounds

	Pounds.	Dollars.
1924	13,201	1,904
1925	75,033	12,917
1926	80,452	11,979
1927	64,831	9,668
1928	111,799	16,981
1929	122,496	20,477

Imports Into the United States

Toilet Brushes, N. E. S.

	Dozen.	Dollars.
1926	473,994	431,134
1927	644,859	551,957
1928	603,028	580,007
1929	386,539	525,365

Toilet Waters Containing Alcohol

	Pounds.	Dollars.
1924	38,105	44,253
1925	10,646	24,421
1926	7,491	11,121
1927	2,723	6,494
1928	5,513	5,173
1929	6,231	13,848

Toilet Waters Not Containing Alcohol

	Pounds.	Dollars.
1924	53,127	28,297
1925	120,290	74,142
1926	107,896	40,717
1927	6,325	3,100
1928	11,954	8,040
1929	18,590	11,990

Tolidin, Toluene Sulfochloride, Etc.

	Pounds.	Dollars.
1925	23,056	3,090
1926	2,329	1,909
1927	19,760	7,887
1928	121,390	50,867
1929	27,763	12,322

Toluene

	Pounds.	Dollars.
1925	73,400	2,642
1926	29,064	1,797
1927	154	55
1928	.....	.....
1929	.....	.....

Tonka Beans

	Pounds.	Dollars.
1871	.....	19,694
1881	.....	80,636
1891	.....	312,537
1901	.....	19,821
1913	783,888	1,140,409
1914	545,156	677,195
1915	132,119	95,222
1916	143,321	94,700
1917	222,754	156,974
1918	405,429	204,260
1919	85,487	46,591
1920	266,090	255,497
1921	188,640	106,481
1922	149,777	111,284
1923	634,025	209,467
1924	302,663	256,610
1925	255,608	175,845
1926	311,942	354,796
1927	291,471	268,637
1928	341,809	334,323
1929	162,408	143,533

Tooth Brushes

	Dozen.	Dollars.
1926	1,178,834	578,818
1927	680,554	319,687
1928	751,189	401,333
1929	2,137,526	1,038,765

Tribromophenol

	Pounds.	Dollars.
1929	1,000	875

Trichloroethylene

	Pounds.	Dollars.
1924	308,673	14,481
1925	222,192	8,689
1926	.....	.....
1927	1,321	92
1928	85,737	5,257
1929	205,928	10,909

Tung Nuts

	Pounds.	Dollars.
1929	1,400	136

Turmeric

	Pounds.	Dollars.
1901	.....	43,874
1913	.....	33,735
1914	.....	22,978
1915	.....	10,145
1916	.....	180,948
1917	.....	112,372
1918	.....	602
1919	689,962	46,205
1920	1,312,539	92,413
1921	737,736	37,136
1922	766,461	26,824
1923	798,032	36,014
1924	1,290,832	89,304
1925	1,084,448	82,334
1926	1,027,608	71,027
1927	1,125,891	47,025
1928	759,031	30,441
1929	796,216	50,881

Turpentine, Gum, Including Venice

	Pounds.	Dollars.
1871	.....	2,980
1881	56,732	8,104
1891	70,185	8,138
1901	191,026	14,789
1913	60,678	9,169
1914	112,010	17,434
1915	20,904	3,172
1916	7,901	772
1917	1,045	248
1918	.....	.....
1919	.....	.....
1920	5,283	2,540
1921	10,914	2,626
1922	4,972	1,027
1923	32,946	4,526
1924	10,187	1,353
1925	9,274	1,534
1926	95,737	11,865
1927	144,699	16,227
1928	61,778	6,223
1929	79,269	9,304

Turpentine, Spirits

	Gallons.	Dollars.
1871	128	116
1881	.....	.....
1891	2,900	1,219
1901	12,697	4,486
1913	56,457	19,295
1914	72,679	28,818
1915	13,680	6,095
1916	20,675	8,252
1917	18,286	6,271
1918	1,433	564
1919	1,422	724
1920	28,506	37,555
1921	16,009	15,121
1922	70,467	45,184
1923	145,148	144,114
1924	153,394	125,391
1925	222,486	161,768
1926	300,855	220,775
1927	331,398	203,169
1928	289,612	156,639
1929	377,183	190,432

Ultramarine Wash Blue and All Blues Containing Ultramarine

	Pounds.	Dollars.
1871	.....	115,816
1881	913,935	127,352
1891	184,352	11,404
1901	319,903	37,790
1913	695,988	62,250
1914	901,208	78,392
1915	641,381	62,715
1916	401,605	44,709
1917	388,201	36,433
1918	359,136	35,210
1919	197,573	25,861
1920	433,443	41,136
1921	898,739	104,263
1922	688,282	69,509
1923	317,708	48,485
1924	777,406	94,818
1925	985,822	142,198
1926	913,468	131,037
1927	849,290	109,362
1928	978,564	119,695
1929	757,385	90,878

Umbers, Crude, Not Ground

	Pounds.	Dollars.
1871	470,392	7,064
1881	1,475,835	11,126
1891	1,586,840	17,150
1901	1,798,788	13,689
1914	3,381,919	25,798
1915	7,225,537	36,128
1916	8,914,389	55,076
1917	9,211,112	66,217
1918	665,195	18,850
1919	425,017	11,776
1920	5,007,345	47,205
1921	7,124,483	77,526
1922	2,666,867	39,155
1923	9,168,941	80,580
1924	5,676,868	55,233
1925	6,570,820	46,568
1926	6,744,894	46,903
1927	5,362,765	36,142
1928	7,400,838	44,722
1929	6,837,881	42,513

Umbers, Washed or Ground

	Pounds.	Dollars.
1924	1,111,055	28,309
1925	1,109,722	24,061
1926	1,333,171	48,693
1927	1,237,456	28,259
1928	1,070,698	26,841
1929	1,226,985	28,741

Uranium Oxide and Salts

	Pounds.	Dollars.
1891	.....	1,974
1901	.....	15,573
1913	.....	21,435
1914	.....	5,782
1915	.....	1,969
1916	.....	2,099
1917	.....	3,018
1918	.....	.....
1919	1,154	1,309
1920	.....	.....
1921	441	468
1922	6,894	5,487
1923	1,285	2,225
1924	11,039	12,695
1925	16,775	14,115
1926	27,476	25,490
1927	66,092	58,282
1928	103,539	87,479
1929	200,341	202,451

Urea

	Pounds.	Dollars.
1914	17,981	8,798
1915	65,464	31,994
1916	79,172	32,498
1917	56,429	36,248
1918	22,777	17,479
1919	11,576	7,695
1920	18,893	10,784
1921	7,714	5,349
1922	136,161	34,953
1923	195,208	40,275
1924	66,318	9,642
1925	101,291	12,406
1926	302,783	27,308
1927	657,243	43,591
1928	768,438	47,508
1929	2,994,430	159,956

Valerian, Crude

	Pounds.	Dollars
1919	54,847	34,450
1920	184,195	64,863
1921	23,084	4,624
1922	29,041	2,610
1923	75,867	7,314
1924	64,142	4,541
1925	75,555	5,792
1926	41,875	8,507
1927	95,175	18,706
1928	71,396	7,255
1929	68,547	8,878

Valonia

	Pounds.	Dollars.
1913	5,295,762	79,610
1914	7,654,056	116,406
1915	6,852,190	88,061
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	150	5
1920	16,636,249	651,984
1921	11,723,598	331,443
1922	23,643,552	444,490
1923	15,070,543	298,704
1924	17,029,469	309,247
1925	24,806,008	404,501
1926	10,257,054	176,980
1927	20,132,216	380,253
1928	10,534,636	271,750
1929	11,450,050	248,430

Valonia and Myrobalans Extract for Tanning

	Pounds.	Dollars.
1919	2,037,349	40,202
1920	2,058,075	59,765
1921	967,892	26,218
1922	1,663,783	35,654
1923	247,951	14,316
1924	658,620	21,659
1925	426,035	12,010
1926	103,446	7,255
1927	558,547	36,183
1928	537,270	39,248
1929	477,797	38,131

Vanilla Beans

	Pounds.	Dollars.
1871	14,764	113,212
1881	37,214	206,030
1891	171,024	594,949
1901	248,994	875,229
1913	1,049,617	2,641,574
1914	694,531	1,739,674
1915	749,146	1,839,995
1916	796,890	1,474,228
1917	733,565	1,583,325
1918	759,096	1,202,413
1919	1,003,072	1,687,305
1920	1,055,670	2,181,210
1921	977,004	1,811,396
1922	1,186,932	2,024,474
1923	1,244,107	2,830,300
1924	831,154	3,440,601
1925	688,798	3,560,843
1926	944,583	3,332,793
1927	974,922	2,403,147
1928	1,283,952	2,079,165
1929	1,137,301	1,648,426

Vanillin

	Pounds.	Dollars.
1901	5,513	2,475
1914	33,668	6,446
1915	451	98
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	71	54
1921	36,178	22,530
1922	10,510	4,240
1923	3,514	1,448
1924	.....	.....
1925	1	6
1926	584	1,273
1927	334	1,426
1928	7,403	48,314
1929	22,350	150,759

Varnish, Gold Size, or Japan.

	Gallons.	Dollars.
1871	.....	252
1881	.....	2,789
1891	.....	1,618
1901	.....	.....
1914	.....	8,706
1915	.....	10,228
1916	.....	423
1917	.....	2,504
1918	.....	1,217
1919	2,005	8,192
1920	930	2,183
1921	1,019	4,456
1922	2,733	7,620

Included in "Varnish, All Other," after 1922.

Varnishes, Spirit

	Gallons.	Dollars.
1891	2,472	7,456
1901	2,603	4,774
1914	10,127	24,329
1915	581	1,937
1916	1,318	6,874
1917	2,771	13,425
1918	1,286	3,083
1919	37	676
1920	782	3,531
1921	707	2,786
1922	2,985	12,431
1923	2,198	8,065
1924	1,407	3,260
1925	487	1,786
1926	231	1,208
1927	333	1,847
1928	403	2,127
1929	929	4,266

Varnishes, All Other, Including Gold Size or Japans

	Gallons.	Dollars.
1871	23,862	72,266
1881	86,814	140,651
1891	32,600	91,111
1901	43,007	114,985
1914	16,888	31,032
1915	27,043	51,791
1916	25,542	62,776
1917	20,366	47,740
1918	10,923	24,345
1919	4,256	14,870
1920	24,271	78,507
1921	17,583	65,292
1922	22,758	76,686
1923	29,118	112,509
1924	17,339	61,701
1925	27,197	60,630
1926	22,095	55,308
1927	33,327	60,925
1928	31,834	51,587
1929	30,407	51,407

Venetian Red

	Pounds.	Dollars.
1891	.....	19,138
1901	4,517,458	86,492
1914	3,858,611	33,077
1915	2,478,959	20,677
1916	1,687,616	12,947
1917	835,161	8,296
1918	433,638	5,135
1919	275,800	3,627
1920	278,673	4,524
1921	393,722	7,968
1922	72,519	2,246

Not stated after 1922.

Verdigris, or Acetate and Sub-Acetate of Copper.

	Pounds.	Dollars.
1871	331,657	56,873
1881	160,745	35,163
1891	212,019	32,016
1901	44,439	6,211
1914	19,009	2,530
1915	17,569	2,491
1916	81,005	15,648
1917	50,216	13,052
1918	26,837	8,694
1919	34,280	13,911
1920	8,809	2,122
1921	27,607	5,760
1922	19,569	3,478
1923	26,278	4,727
1924	62,306	4,787
1925	98,215	10,111
1926	49,945	6,186
1927	28,325	3,656
1928	25,638	4,079
1929	34,993	8,563

Vermilion Reds (Containing Quicksilver)

	Pounds.	Dollars.
1871	79,195	43,955
1881	14,243	7,392
1891	35,381	18,632
1901	110,961	27,958
1914	72,881	34,379
1915	95,659	58,697
1916	71,515	92,990
1917	17,557	24,170
1918	7,620	10,116
1919	9,556	17,439
1920	35,670	48,948
1921	22,203	22,868
1922	1,362	927
1923	48,733	39,284
1924	88,551	65,867
1925	145,405	125,342
1926	147,411	135,773
1927	182,188	187,444
1928	77,934	103,786
1929	95,090	125,198

Wash Blue Containing Ultramarine

	Pounds.	Dollars.
1891	166,327	23,407
1901	454,032	60,279
1914	.....	12,906
1915	.....	6,485
1916	.....	4,907
1917	.....	25,280
1918	.....	15,686
1919	53,703	11,261
1920	134,812	22,955
1921	83,437	17,206
1922	50,835	7,266

Included in "Ultramarine, etc.," after 1922.

Wax, Carnauba

	Pounds.	Dollars.
*1928	2,813,304	809,833
1929	6,547,447	1,390,452

* January-June, 1928.

Wax, Mineral or Vegetable

	Pounds.	Dollars.
1881	98,911	12,792
1891	1,486,125	127,159
1901	4,944,891	490,775

Stated separately for later years.

Wax, Mineral

	Pounds.	Dollars.
1914	7,974,157	537,684
1915	6,284,757	401,500
1916	2,081,083	141,539
1917	2,054,722	150,241
1918	1,708,514	135,920
1919	2,680,155	313,371
1920	2,717,300	423,468
1921	4,757,396	433,076
1922	10,811,967	524,519
1923	7,974,398	334,741
1924	2,691,250	78,835
1925	4,425,721	272,948
1926	8,032,062	469,530
1927	7,543,995	564,027
1928	9,156,731	509,861
1929	10,416,720	609,760

Wax, Vegetables, N.E.S.

	Pounds.	Dollars.
1914	4,336,276	1,043,337
1915	5,388,398	999,535
1916	9,594,111	1,551,996
1917	7,210,103	1,742,640
1918	8,636,881	2,670,022
1919	8,331,475	3,012,783
1920	9,949,567	3,681,707
1921	6,235,416	1,600,074
1922	7,242,520	1,012,731
1923	9,474,406	1,510,846
1924	8,037,186	1,158,855
1925	7,578,262	1,299,888
1926	7,709,677	1,917,960
1927	9,903,911	3,667,948
1928	6,228,927	1,409,142
1929	4,380,246	705,252

White Lead (Basic Carbonate)

	Pounds.	Dollars.
1871	8,337,842	483,392
1881	1,068,031	60,133
1891	626,414	43,041
1901	379,388	21,993
1914	656,884	44,436
1915	514,876	35,743
1916	153,474	11,970
1917	57,045	5,054
1918	887	289
1919	21,153	2,477
1920	33,472	4,724
1921	225,930	24,690
1922	118,119	11,908
1923	324,776	30,563
1924	232,229	21,257
1925	126,151	12,876
1926	311,995	33,495
1927	276,080	25,594
1928	273,142	25,549
1929	193,052	18,643

Whiting or Paris White, Dry, Ground and Bolted

	Tons.*	Dollars.
1871	5,219,396	24,710
1881	1,974,913	7,806
1891	1,042,518	4,239
1901	507,745	1,863
1914	2,361,605	10,453
1915	5,387,038	15,705
1916	3,655,123	14,459
1917	2,147,895	11,292
1918	4,908,295	31,038
1919	586,780	5,097
1920	3,639,237	28,610
1921	20,393,338	191,558
1922	22,391,035	114,784
1923	40,446,737	149,636
1924	46,301,120	148,651
1925	46,385,585	153,507
1926	42,999,390	142,075
1927	26,132	160,505
1928	31,220	185,465
1929	35,874	177,940

*Quantity stated in pounds prior to 1927.

Witherite

	Pounds.	Dollars.
1891	.....	13,008
1901	.....	15,208
1914	1,223,926	7,927
1915	888,292	6,674
1916	1,714,414	20,446
1917	1,420,752	16,071
1918	1,194,268	20,146
1919	46,468	2,555
1920	1,195,824	22,465
1921	2,516,289	53,748
1922	2,692,290	41,589
1923	2,204,016	24,609
1924	4,283,948	54,975
1925	4,771,174	61,966
1926	6,189,123	76,009
1927	5,060,924	59,067
1928	8,120,395	78,048
1929	10,815,155	106,471

Worm Gut, Unmanufactured

	Pounds.	Dollars.
1924	14,218	116,946
1925	10,307	96,468
1926	**12,530**	**110,893**
1927	10,723	105,002
1928	9,766	120,721
1929	16,963	178,980

Wood Flour

	Pounds.	Dollars.
1914	15,171,972	84,751
1915	11,482,934	60,131
1916	13,731,979	74,479
1917	8,703,664	57,521
1918	3,788,486	43,852
1919	840,000	9,559
1920	2,922,063	41,353
1921	**9,442,617**	**196,176**
1922	**14,481,469**	**88,513**
1923	**10,743,482**	**70,606**
1924	11,757,382	84,475
1925	11,817,024	94,603
1926	**14,004,866**	**97,891**
1927	12,361,933	74,021
1928	14,264,449	90,477
1929	15,407,454	117,332

Xylene

	Pounds.	Dollars.
1925	72,300	2,620
1926	**192,590**	**11,381**
1927	288,300	13,813
1928	216,300	8,733
1929	214,260	7,219

Xylidin

	Pounds.	Dollars.
1920	56,047	41,237
1921	.....	.....
1922	.....	.....
1923	**150**	**60**
1924	.....	.....
1925	.....	.....
1926	.....	.....
1927	.....	.....
1928	.....	.....
1929	5	48

Zaffer

	Pounds.	Dollars.
1920	220	14
1921	.....	.....
1922	.....	.....
1923	.....	.....
1924	.....	.....
1925	.....	.....
1926	**110**	**40**
1927	.....	.....
1928	.....	.....
1929	.....	.....

Imports Into the United States

Zinc Ores

	Zinc content. Pounds.	Dollars.
1913	25,214,528	526,173
1914	11,762,861	169,986
1915	14,259,176	321,135
1916	81,779,564	3,376,166
1917	293,958,919	8,186,015
1918	31,822,890	580,758
1919	63,636,426	1,347,067
1920	18,965,938	310,515
1921	41,628,246	587,126
1922	38,304,275	653,343
1923	**3,904,965**	**88,610**
1924	3,997,144	270,810
1925	746,554	36,808
1926	**29,991**	**2,263**
1927	301,225	12,655
1928	462,021	12,317
1929	5,118,676	192,594

Zinc Ashes

	Pounds.	Dollars.
1871	2,075,899	103,493
1881	2,044,778	106,990

Not stated after 1881.

Zinc Chloride

	Pounds.	Dollars
1901	898,205	28,192
1913	1,252,319	37,078
1914	789,296	25,503
1915	194,250	5,805
1916	12,643	463
1917	6,216	629
1918	197,570	15,381
1919	.....	.....
1920	80,228	7,762
1921	4,054,862	235,274
1922	3,290,928	104,553
1923	**1,761,272**	**65,580**
1924	546,239	24,410
1925	823,541	43,792
1926	**825,403**	**41,754**
1927	1,240,987	53,246
1928	1,179,107	48,515
1929	1,123,990	46,426

Zinc Dust

	Pounds.	Dollars.
1913	5,615,766	317,492
1914	4,788,433	223,775
1915	2,278,533	132,822
1916	1,365,705	255,182
1917	522,587	83,[illegible]
1918	263,428	25,109
1919	24,982	1,637
1920	98,921	8,036
1921	13,023	2,287
1922	202,066	5,470
1923	**46,224**	**1,977**
1924	52,660	4,307
1925	266,595	22,454
1926	**38,209**	**4,013**
1927	645	74
1928	155,131	9,787
1929	180,058	7,305

Zinc Oxide, Dry

	Pounds.	Dollars.
1912	4,842,948	310,362
1913	6,148,120	388,485
*1914	1,408,162	88,410

* Figures are for July 1 to October 3, 1913. Stated separately after October 3, 1913.

Zinc Oxide, Dry Powder

	Pounds.	Dollars.
1891	2,629,858	136,366
1901	2,831,620	145,823
1914	5,315,807	309,106
1915	2,565,434	148,143
1916	1,441,299	244,934
1917	285,433	65,633
1918	294,796	55,302
1919	132,486	30,346
1920	1,549,644	174,658
1921	1,886,076	171,328
1922	5,521,525	352,018
1923	**3,210,097**	**229,115**
1924	2,436,456	176,811
1925	3,538,279	247,748
1926	2,099,143	186,275
1927	2,735,588	221,504
1928	2,672,516	212,929
1929	2,561,995	200,630

Zinc Oxide, Ground in Oil or Water

	Pounds.	Dollars
1891	139,371	7,226
1901	53,851	4,182
1914	292,571	21,595
1915	156,451	11,525
1916	66,347	7,187
1917	14,089	1,225
1918	273	57
1919	7,088	1,050
1920	12,771	2,358
1921	89,641	11,009
1922	74,210	11,857
1923	120,674	15,205
1924	211,358	23,586
1925	235,112	29,028
1926	218,358	25,713
1927	186,312	22,925
1928	148,831	17,662
1929	272,790	34,399

Zinc Sulphate (White Vitriol)

	Pounds.	Dollars.
1881	12,898	294
1891	.....	.....
1901	32,812	752
1913	23,778	817
1914	107,065	2,176
1915	68,940	1,027
1916	.....	.....
1917	28	44
1918	21	35
1919	221	113
1920	10	10
1921	100,829	3,314
1922	55,679	1,096
1923	28,413	1,771
1924	37,126	2,854
1925	17,988	1,359
1926	94,875	2,784
1927	177,285	6,053
1928	799,126	16,922
1929	1,924,544	36,453

Zinc Sulphide

	Pounds.	Dollars.
1901	1,595,236	47,697
1913	5,163,642	144,812
1914	1,338,999	42,1[illegible]
1915	283,356	8,979
1916	96,402	7,368
1917	53,587	8,451
1918	7,098	4,535
1919	5,703	1,837
1920	15,271	5,475
1921	69,135	16,915
1922	73,334	5,977
1923	24,086	9,374
1924	8,044	4,562
1925	5,338	4,534
1926	15,947	6,087
1927	42,611	9,100
1928	213,441	39,[illegible]
1929	607,482	78,286

Current Imports and Exports of

Chemicals, Oils, Drugs, and Related Materials

are published every week in the

OIL, PAINT AND DRUG REPORTER

Trade Leaders Discuss Business

(Continued from page 9)

plain. In the late summer, Europe purchases a great deal of wheat for the purpose of mixing with her own newly harvested wheat, but the last crop of wheat in Europe, generally speaking, has been of very good quality with low moisture content and was ready for milling almost immediately after harvesting. Due to the unfavorable outlook of the Canadian wheat crop late in July and August, prices advanced rapidly during that period in the United States and Canada, so that Europe used as much as possible of her own wheat instead of purchasing high-priced wheat in this country or in Canada. Argentine wheat acted in sympathy and also advanced, but, nevertheless, the Plate wheat remained so much below our price level that it was very attractive for Europe to buy wheat in Argentina for mixing when the quality of their own wheat was so very good. Europe always needs foreign wheat, but there is no matter of sentiment with them and they will only buy in the cheapest market, but with the poor outlook of the new crop in Argentina it is generally believed there will soon be a large export demand from the United States and Canada in the very near future, as stocks of wheat in Europe are decreasing rapidly.

Many now consider United States hard winter, as compared with Argentine wheat and price, the cheapest milling wheat in the world. If the exportation of wheat develops, as expected very soon, and they take the usual quantity of wheat available for this purpose, which is now about 165,000,000 bushels, at or near present prices, it will be a great aid to finance and to the buying power of our country.

One of the most promising signs of our prosperity is the increase in our foreign trading and that manufactured articles are supplanting raw materials in importance of our export trade. Also that official estimates give the figure of $7,381 as the value produced by the average wage-earner in the country's industrial plants in 1929 as compared with about $2,420 in 1899. No country in the world approximates the 1929 figure. Also that new life insurance written in 1929 averages a billion dollars per month, and that savings stand at the figure of $28,000,000,000, and that we lead the world in the growth of our export trade.

We are steadily working out of the effects of the recent stock crash, for business in general is getting back to a healthier trend as each week passes, and I look for a sounder basis for the expected growth and expansion in 1930 than we had in 1929.

Harry Hodgson

Hodgson Oil Refining Company, Athens, Ga.

President, National Cottonseed Products' Association

Our business is progressing satisfactory. Profits for the last six-months of 1929 are somewhat less than for the same six months of 1928. In the remaining six months of our fiscal year ending June 30, 1930, we look for improvement as conditions in our section are healthy.

I think the cotton oil mills of the South will do better the present season than the year preceding.

Georgia farmers received something more than $20,000,000 from their cotton and tobacco crops in 1929 than they did in 1928.

Henry W. Caragol

Caragol-Young Company, New York

President, Olive Oil Association of America

During the past year the olive oil and allied industries have been faced with a most difficult situation, and only those who have pursued a most cautious policy of buying strictly according to their immediate requirements find themselves today in a position to look back with any satisfaction on one of the most difficult years for all the industry.

Trading with the producing countries has been curbed, and while some claim that the crash in Wall Street had something to do with the tremendous fall in prices to present levels, I personally am of the opinion that Wall Street had no more to do with the situation than the Bowery or Park Avenue.

The consumption according to latest figures has continued to increase, but profits have been greatly reduced owing to large crops and carryovers from one year to another, causing weak markets abroad, with practically steady declines through the past year. The impending tariff, which is still a matter of grave concern to all importers and exporters, has caused no little unrest and overloading by some importers who were led to believe that a new tariff might increase the duty to such an extent that it would profit them to carry large stocks, in spite of weak and declining markets abroad.

The situation at present seems to me to be healthy, as with the exception of those who purchased against an impending tariff—and they were in the minorty by far—actual stocks on hand are low, and prices abroad have reached most tempting levels.

Many buyers feel that, while prices may go still slightly lower, certainly their near requirements should be covered, and in the first few weeks of the new year there has been more confidence and purchasing. It is my belief that the olive oil industry is going through a period of the survival of the fittest, and both in this country and abroad trading will be limited to large organizations. The outlook seems good, as the consumption should greatly increase with lower prices and the unscrupulous will find it less profitable to adulterate pure olive oil with other vegetable oils.

It would seem that the American housewife has at last been educated to the fact that all imported olive oil is not adulterated, and if they buy from reliable dealers the pure article is abundant and comparatively low in price. This will undoubtedly tend to further increase the consumption. There has been considerable discussion by the trade, both here and abroad, on what this industry really needs most, and that is, a national advertising campaign, principally educational, and while this may not be possible in the year 1930, certainly such a compaign will be forthcoming in the not far distant future.

C. P. McCormick

McCormick & Co., Baltimore

President, Mayonnaise Products Manufacturers' Ass'n of America

"Quality" should be the watchword for 1930, now that a standard has been adopted and will be enforced, and we know what is meant by "Mayonnaise."

There is no question but that the mayonnaise industry has gone ahead during the last year, 1929. The activities have been keener, the general average quality of merchandise has improved as many poor quality manufacturers have fallen by the wayside. The merging of a few good sized manufacturers into one large combine has possibly changed the leadership held formerly by a fine house during the past eight years. Other mergers will have a tendency toward changing the present ratio of leaders. The industry does not particularly profit one way or the other by these mergers, for they are all on about the same quality basis—but they will make it harder for the independent unaggressive manufacturer that tries to exist on poor quality.

Many distributors that formerly distributed national brands of mayonnaise are going into the game on their own resources, and most of them are making good strides, as quick distribution prevents many manufacturing troubles in marketing a perishable article. Slow turnover on these articles means ultimate loss of business; while on the other hand, quick turnover means success if the product is good and the package is correct.

The future during 1930 is predicted as being one with good prospects. Increased sales should prevail. Increased sales on salad dressings will continue, as there is apparently a splendid market for this in conjunction with mayonnaise. Sandwich spreads seem to be increasing in volume, and a splendid future for increased consumer acceptance is in store. Increased number of manufacturers entering the field will doubtless overshadow the inefficient failures. With the closer co-operation of the industry in their association work and local trade practice conferences, it should develop into a more profitable business to those in it.

We see, all in all, 1930 has a bright oulook for those in the business of distributing mayonnaise products.

Frank B. Ross

Frank B. Ross Company, New York

President, New York Wax Importers' Association

The volume of business in the wax trade during 1929 was very good, especially for carnauba wax, which is one of the leading items of imported waxes.

The total imports of carnauba during 1929 were about 3,100 tons, which was an increase of about 250 tons over the previous yeor. Consumption during 1929 also increased. At the close of the year, stocks of carnauba in importers' and dealers' hands had diminished to almost the vanishing point; in fact, some of the grades were unobtainable.

In spite of the good demand, prices steadily declined throughout the year, until at the close values had reached very low levels, not only for carnauba, but beeswax, Japan wax, and montan wax are also selling today at very low few exceptions, are selling at about record low prices.

As far as the wax trade is concerned, I can safely say that we have had profitless prosperity. This was due partially to steadily declining prices, but I believe the principal cause was the ruinous price cutting that has prevailed throughout the wax trade. As someone recently said: "competition may be the life of trade, but it is the death of profit." While profit did not actually die during 1929, it was in a very low state of health throughout the entire year.

During 1930 I look for a continued good demand for waxes. There may be a slight falling off during the first quarter, but I believe the rest of the year will more than make up for any slackening that might take place during the first quarter. I also look for gradually advancing prices during 1930 because I believe that prices of all raw materials are scratching bottom at the present time.

Of course, there is no denying the fact that the recent stock speculating debacle has had its bad effect on general business, but I believe the general slump in business will be short lived and the country will soon be enjoying even better prosperity than ever before. Everything is on a very sound basis. Our banking institutions are larger and more sound than ever before, in spite of the worst stock market crash in history. With few exceptions, inventories are small; commodity prices are low and money is cheap. I do not believe that we could have a more optimistic outlook for real good business in 1930.

Industrial Chemicals: Market Review

Operations throughout the industrial chemicals were record breaking in their scope during 1930. Consumers had shown the utmost confidence in the position of the market at the outset of the year and had covered themselves on contract in a majority of the big items. The effort of the producers was mainly to maintain stability and the course of values throughout the year attested ably to their efforts in this direction. So great was industrial activity in practically all consumer industries in which industrial chemicals are consumed that shipments in each month exceeded those of the preceding period by a wide margin.

It became evident at the end of the first quarter that products of the chemical industry were being consumed in ever increasing quantities. Various new elements were introduced into the market during the first quarter when the effort all down the line had been to adjust production to consumption. Business as a whole was in satisfactory shape during this quarter and the outlook closed with a majority of those vitally interested optimistic on the general outlook. A little uncertainty appeared during the second quarter, no doubt because of uncertainties attendant upon tariff revision prospects, and an increasing amount of competition. However, production and sales were maintaining a higher average rate than in the preceding year and the half year ended with a gratifying volume of business reported. During the third quarter there was a little recession from the active volume of trade that had been moving, although the industry's profits were adjudged to have been greater on the whole. In nearly all instances business during the first three quarters of the year was reported in a larger volume than in the preceding period.

In fact for the first time the total volume of business moving in all groups comprising industrial chemicals, inclusive of acids, etc., had exceeded the record totals established during the World War. While it was difficult to particularize the best opinion among closely posted interests, was that the total turnover of heavy chemicals during 1929 was at least one and one-half times as big as it was during the war time period, the only logical comparable one. The first six months of the year was said to have been better than any preceding nine months which had theretofore been witnessed.

Comparative Indexes Turn Higher

From the low point of 155.2 the comparative figures for twenty industrial chemicals moved up to 161.0 at the end of the first quarter, only to show a further improvement to 161.9 at the start of July. During the third and fourth quarters of the year this index figure was pegged at 161.2, viz:—

Jan. 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
155.2	161.0	161.9	161.2	161.2

Statistical data was produced to show that the peak of the boom in the industrial chemical market coincided fairly well with the time when operations in the trades and industries had reached their peak in June. While not readily recognizable, the down trend of business appeared to start at this time and the debacle of the security markets which did not come along until about October seemed to emphasize a definite change which had overcome the industry. A major downward movement set in at this time in the securities market more devastating than had ever been previously witnessed in a quarter of a century. This was believed to have run its course by the middle of November, but market prognosticators were not at all sure but what it would be carried through the first six months of 1930, although there was every reason for believing that the current year would stand out as one of unusual stability in general business and industry. The great psychological change which had come over manufacturers and business men following the efforts of the administration in Washington to check further business recession resulted in a materially improved marketing outlook all down the line. Business had adjusted itself to an entirely different economic plane and the horizon had generally cleared as a new year opened.

Proposed Tariff Changes

The first tentative report of the proposed new tariff bill was made early in May. Only a comparatively few changes in the rates of duty on chemicals and allied commodities were carried in the bill as introduced into the House. There were readjustments in some items to meet changed conditions of certain industries since 1922 and in this connection there were 33 increases and 6 decreases, while thirteen items were transferred from the dutiable list to the free list. Congress gave exceptional consideration to the chemical industry because it represented one of the country's key activities.

Included among the proposed changes in the tariff rates were a 25 percent duty on chromic acid against its previous free status, increase in duty on citric acid from 17c. to 18c.; formic from 25 percent to 4c. per pound; gallic from 8c. to 10c. per pound; nitric from free to ½c. per pound, phosphoric more than 80 percent from 2c. to 3½c. per pound; pyrogallic from 12c. to 15c. per pound; tannic less than 50 percent from 4c. to 6c. per pound; tannic more than 50 percent from 10c. to 12c.; tartaric from 6c. to 8c.; vanadic salts from 25 percent to 40 percent; ammonium carbonate from 1½c. to 2c. per pound; argols containing less than 90 percent potash bitartrate from 5 percent to the free list; more than 90 percent potash bitartrate to remain at 5c. per pound; barium chloride to be increased from 1½c. to 2c. per pound; barium oxide from 25 percent to 2½c. per pound; potash citrate from 25 percent to 18c. per pound; potash perchlorate from 1½c. to 2¼c. per pound; refined potash nitrate from ½c. to 5½c. per pound; sodium oxalate from 25 percent to 3½c. per pound, soda phosphate containing less than 45 percent water 1c. per pound, and other 2c. per pound; soda sulphate anhydrous from $2 to $4 per ton; zinc sulphide from 1½c. to 3c. per pound; calcium arsenate, which had been assessed at 25 percent to come in free; phosphorus oxychloride and trichloride to be changed from 25 percent to 6c. per pound; soda silicofluoride to be changed from 25 percent to 1¾c. per pound; butyl acetate from 25 percent to 7c. per pound, and calcium oxalate from 25 percent to 4c. per pound. In the course of discussion over the bill in the Senate Finance Committee importers took occasion to criticize existing high rates in the bill. In the case of the foreign valuation feature it was urged that a change be made, but in this bill as others which had gone before it the foreign valuation was retained because adequate information has never been available for proper conversion to a domestic value. This was in spite of the presentation of some of the importers that the retention of foreign valuation on some of the raw materials in the lacquer materials group virtually constituted an embargo.

Closer Control by Conventions

A considerable part of the stability enjoyed by the industrial chemical market last year came as a result of the success of foreign conventions in controlling prices. As a result of this there were only a few instances of price adjustments and while consumers had in some instances to pay a little more for their supplies than if the markets had been free and competitive at all times, buyers were assured of reliable supplies at all times. The opinion was expressed, in fact, that the time might come when practically every chemical would be produced and sold at fixed prices and distributed through regulated and controlled hands. On the other hand, it was asserted that the lack of an outlet for increasing tonnage might be followed by wholesale cancellation of rings, conventions and combines. Whatever the outcome, it seemed clear that the great test was sure to come within the next two or three years, as it was admitted that world's production was constantly increasing and was, in some instances, already in excess of requirements.

The number of conventions here and abroad governing the prices of products had increased. A British authority pointed out that conventions had had a fair trial, and that they had justified their establishment. They have the effect of steadying the markets, while to buyers they give a fairly good guarantee of a reliable source of supply. The movement, commenced a few years ago, of the formation of huge combines has made a little more headway, but there is now a distinct feeling that this movement has its drawbacks as well as its desirable points. There is a growing opinion that while rationalization may be applied to and be beneficial to some industries its application does not seem to be practicable to an industry so diverse and complicated as is the chemical industry for rationalization that does not afford a monopoly is useless. Doubtless the outstanding chemical combine in Great Britain was, after some three years, fast getting into its stride and had little to regret for being the pioneers. But it must be remembered that this particular combine had numerous manufacturing interests far removed from that of producing chemicals, and where chemicals are concerned they have very considerable monopolies, as, for instance, in alkali products.

So far as this phase of chemical marketing applied to our home markets, it was pointed out that the value of exports by associations under the provision of the Webb Export Trade Act had increased from $140,000,000 in 1924 to $371,500,000 in 1927. The total value of the exports of strictly chemical products was estimated roughly at some $200,000,000, of which alkalies, paint products, phosphates, sulphur, etc., totaled but $17,000,000, revealing the opportunities which are open for increasing exports under export trade association supervision.

Chemical Exports Increase

While on the subject of exports it was of interest to note that in the first eleven months of last year the total exports of soda compounds had amounted to 652,291,818 pounds of the value of $11,314,371 as compared with 495,070,630 pounds valued at $10,786,233 in the same time in the year before. The exports of sulphuric acid during the first ten months of the year had amounted to 5,585,050 pounds in contrast with 6,046,230 pounds in the same time in the year before, which was a decline of 7.6 percent. In the first eleven months of the year the exports of boric acid increased to 5,115,873 pounds, against 3,188,487 pounds in the preceding eleven months; exports of alumina sulphate in the same period being 47,715,956 pounds as against 40,978,228 pounds in the year before, calcium carbide in the amount of 4,133,171 pounds was exported during this period against 3,385,748 pounds in the year before, while exports of bleaching powder were 4,963,228 pounds as against 20,866,782 pounds in the previous year; exports of calcium chloride reached 29,869,694 pounds against none the year before, while blue vitriol exports were 5,570,560 pounds as against 7,650,055 pounds, potash compounds about 3,000,000 pounds, against 4,500,000 pounds the year before, bichromate and chromate of soda 5,079,568 pounds as against 7,500,000 pounds in the year before, silicate of soda exports 144,260,038 pounds as against 129,833,099 pounds in the year before, soda ash 70,282,470 pounds as against 61,317,139 pounds in the year before, soda bicarbonate 16,872,159 pounds as against 17,403,255 pounds in the year before, caustic soda about 109,000,000 pounds against about 109,400,000 pounds the year before, other sodium compounds about 208,000,000 as against 114,002,449 pounds the year before, tin salts in the amount of 645,033 pounds as against 585,073 pounds the year before, zinc compounds 3,234,368 pounds as against 3,279,273 pounds in the year before, and chlorine 6,420,915 pounds as against 5,039,452 pound the year before.

Import Movement Irregular

As a result of falling production of potash salts in France and Germany last year, there was a corresponding decline in the volume of importations. In the first ten months of the year ending with October the imports footed up to 305,695 long tons as against 310,652 in the corresponding period of the previous year. Sales in Germany during this period amounted to 1,212,235 metric tons, a loss of 1.6 percent as compared with a production of 1,231,607 metric tons in the corresponding period of the previous year. Included in the list of major imports during the first eleven months of last year were some 24,258,639 pounds of white arsenic as against 20,483,403 pounds in the corresponding period of the previous year, 1,348,878 pounds of formic acid as against 1,942,940 in 1928, 16,208,911 pounds of oil of vitriol as compared with 24,093,631 pounds, 28,000,000 pounds of acetic or pyroligneous acid against none reported the year before, 8,600,000 pounds nitrate ammonia against 12,042,000 pounds in the year before, 7,520,000 pounds barium compounds as against 14,016,297 pounds in the year before, 3,000,000 pounds calcium carbide against 2,293,000 pounds in the year before, 450,000 pounds cobalt oxide as against 338,000 pounds the year before, 4,851,000 pounds blue vitriol as against 3,954,833 pounds the year before, 16,725,000 pounds magnesium compounds as against 16,443,000 pounds the year before, 21,000,000 pounds potash carbonate as against 14,700,000 pounds the year before, 14,000,000 pounds caustic potash as against 10,500,000 pounds in 1928, argols, 16,600,000 pounds as against 11,658,000 pounds in the year before, chlorate and perchlorate of potash 12,300,000 pounds as against 11,914,000 pounds, cyanide of soda 37,690,503 pounds as against 34,626,722 pounds, yellow prussiate of soda 1,783,139 pounds as against 1,458,435 pounds in the year before.

Big Demand from Textile Mills

No small share of the total volume of industrial chemicals produced in 1929 were consumed in the textile industry. Spindles in the cotton divisions of the industry were operating at better than 100 percent of single-shift capacity for the first nine months of the year and new production records were established. Not until September was there any worthwhile curtailment from any direction, and it did not actually become pronounced until quite late in the year, when overproduction threatened. The textile industry as a whole, however, did not share in the prosperity which was common to so many other industries last year, possibly because of technical shortcomings which added to producing costs. It was because of this that scientific research was proposed with a view of correcting conditions in the industry. Of course, various branches of the industry, such as the rayon, took increasing quantities of chemicals, the like of phosphate of soda, acids, alkalis, etc., and the total amount of stock absorbed by these branches was perhaps greater than it had been in the year before.

Mergers in Domestic Field

By way of protecting themselves against the close co-operation which had been undertaken between European chemical producers, manufacturers here again undertook programs of expansion which resulted in a pooling of the industrial chemical resources of the Grasselli Chemical Company with those of the E. I. duPont de Nemours & Co. Another interesting merger was that arranged when the assets of the Kalbfleisch Corporation and those of the American Cyanamid Company were merged. In addition, the assets of the American Cyanamid Company were consolidated with those of the Selden Company, of Pittsburgh, bringing under centralized control a number of organic intermediates used by the American Cyanamid Company. The products of the Selden Company included phthalic anhydride and anthraquinone, as well as a special catalyst for the production of sulphuric acid. The Kalbfleisch Corporation, on the other hand, was one of the oldest in the country, its six plants in this country specializing in the manufacture of chemicals for the paper and textile industries. The American Cyanamid Company, through its long program of extensions, had also acquired the Calco Chemical Company, one of the leading manufacturers of synthetic organic chemicals and as then constituted was made up of subsidiaries manufacturing chemicals for mining, metallurgical and general industrial use, coaltar products and fertilizers. It now controls plants in this country, Canada and Spain and ore mines in Dutch Guiana.

The entrance of the powerful German chemical cartel into this market by means of the formation of the American I. G. Chemical Corporation last year was another one of the interesting developments. With assets of over $60,000,000, the corporation was expected to enter into a very diversified field of business in this country. One development during the year which provoked no small amount of attention was the construction in Germany by a German concern of a plant for the manufacture of citric acid by the fermentation of molasses. The process consisted of the treatment of molasses by citromyces mucor and related ferments at low temperature.

Refrigerating Hazards Arise

Hysteria accompanying the deaths of a number of persons through faulty refrigeration apparatus in Chicago in the summer of 1929 was at first blamed on methyl chloride, the chemical which was utilized. The order that sulphur dioxide be substituted in multiple-unit refrigerator systems was not regarded as having eliminated the dangers. In fact, the remedy was believed to lie in an improvement in the apparatus, and in this connection the largest producers of methyl chloride pointed out that any mechanical system which supplies a large number of individual units, necessitating the concentration of a large quantity of gas, must be so constructed as to eliminate all possibility of leaks. The panic which naturally accompanies accidents of this kind will unquestionably prove of benefit to the entire mechanical refrigeration industry. Those companies who are building and recommending multiple-unit systems will be compelled to take precautions which every industry should take when it is handling gases. The single-unit manufacturers will also be on their guard, although the amount of refrigerant used in a single unit is usually so small that, irrespective of the refrigerant utilized, little if any danger can be apprehended therefrom.

Blue Vitriol Up with Copper

One has to go back virtually a decade for a parallel to last year's record high prices in the market for copper sulphate. If the producers failed to secure the record distribution to the agricultural trade which they had experienced in the preceding year it was because their producing costs were constantly advancing in sympathy with an advance from 16¼c. to 24c. per pound in metallic copper in the spring

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of 1929, or between January and March. There was a succession of advances in the sulphate during February and March ranging from 15c. to 35c. per 100 pounds which finally established the sulphate at $7 per 100 pounds compared with $5.50 in January. These were the highest prices realized for copper sulphate since 1920 when the price had been $8.25 per 100 pounds. In 1919 the price touched $9.25 for January; in 1916, the record high figure of $23 per 100 pounds was reached. An enormous demand came into the market for blue vitriol on each succeeding advance as the feeling in consuming circles was that it would be a costly procedure to wait out a lower price. It was developed towards the first of April that the rank and file of consumers had only provided against a small portion of their total requirements in the product up to the time that the price basis reached $7 per 100 pounds. Meanwhile large foreign shipments were being made to Latin American points. Large shipments were also arranged against the contracts which had been entered in the early months of the year during May and June, but the big rush which was expected failed to materialize. By June the edge had come off the copper market, prices having reacted to an 18c. per pound delivered basis. During July there were fair sized sulphate shipments to Maine and Pennsylvania points. Maine potato growers as well as those on Long Island took practically as much sulphate as they had in the preceding year. A little after Labor Day the demand had run its logical course and apart from a few additional orders which were going out for the agricultural trade in Florida there was no demand of importance. The copper metal market stayed pegged at the 18c. basis during the last half of the year. During the period of high prices for metallic copper wages of mine workers were raised on several occasions. Since these increases were conditional upon the maintenance of prices for the metal they were naturally pared down when the edge came off the metal. When the metal was up to 24c. per pound in March all copper producing units were operating at capacity. The big users including public utility companies contracted for enormous quantities of the metal during the first half of the year. Demand tapered off towards June, however, when the first news that production was being curtailed came out. Producers had evidently been successful in their fight to stabilize the price at the 18c. per pound basis, although as the year closed they were still announcing some rather drastic cuts in production through the closing of mines. Total domestic withdrawals of copper in 1929 were the largest on record.

Copper prices rose from a monthly average of 13.9c. a pound in January, 1928, to 15.9c. in December, and continued the rapid advance to a high of 23.775c. a pound at refinery, March 23, 1929, where it held until April 5. From April 5 to April 15 the price dropped to 17.775c. a pound, where it remained to the end of the year. Heavy demand followed by increased prices brought fourth the highest smelter and refinery production on record. The smelter production of copper from domestic ores in 1929 as determined by the Bureau of Mines from reports of the smelters showing actual production for 11 months and estimated production for December, was 2,030,000,000 pounds, compared with 1,826,000,000 pounds in 1928. The 1929 production was 11 percent higher than that of 1928, and was the largest production on record. The production of new refined copper from domestic sources, determined in the same manner as smelter production, was about 2,022,000,000 pounds, compared with 1,792,000,000 pounds in 1928. In 1929 the production of new refined copper from domestic and foreign sources amounted to about 2,772,000,000 pounds compared with 2,488,000,000 pounds in 1928, an increase of 284,000,000 pounds or 11 percent. The production of secondary copper by primary refineries increased from 232,000,000 pounds to about 308,000,000 pounds in 1929, or 76,000,000 pounds, so that the total primary and secondary output of copper by the refineries was 13 percent higher in 1929 than in 1928, being about 3,080,000,000 pounds compared with 2,720,000,000 pounds. The imports of unmanufactured copper during the first 11 months of 1929, according to the Bureau of Foreign and Domestic Commerce, amounted to 905,912,237 pounds, a monthly rate of 82,000,000 pounds compared with 787,073,640 pounds for the entire year 1928, a monthly rate of 66,000,000 pounds. The total imports for 1929 will very likely show an increase in quantity of approximately 200,000,000 pounds for the year ,or very nearly 25 percent. The exports of metallic copper during the first 11 months of 1929 amounted to 933,255,654 pounds compared with 1,121,186,640 pounds exported during the entire year 1928. Exports for the year did not exceed 1,000,000,000 pounds. In the first 11 months of 1929, 849,195,117 pounds of refined copper in ingots, bars, rods and other forms, were exported. Of this quantity the United Kingdom received 194,671,328 pounds, the highest amount, Germany was next with 168,531,203 pounds, and France was third with 155,488,031 pounds. In the entire year 1928 the United Kingdom received the largest amount, 212,771,665 pounds, Germany was next with 206,583,503 pounds, and France was third with 172,607,211 pounds. Refineries reported that at the end of 1929 approximately 265,000,000 pounds of refined copper would be in stock, considerably more than double the 114,000,000 pounds at the end of 1928. It was estimated that stocks of blister copper at the smelters, in transit to refineries, and at refineries, and materials in process of refining, would be about 943,000,000 pounds on December 31, compared with 423,000,000 pounds at the end of 1928, an increase of 20,000,000 pounds. Therefore, an increase of 171,000,000 pounds in total smelter and refinery stocks is indicated. The quantity of new refined copper withdrawn on domestic account during the year was about 1,849,000,000 pounds, compared with 1,609,000,000 pounds in 1928, an increase of 240,000,000 pounds, or nearly 15 percent, and was the highest ever recorded.

Acetic Acid and Lime Acetate

It will be recalled that during the Summer and Fall of 1928 the producers of lime acetate because of curtailed production at wood products plants had been forced to name two successive advances of 50c. per hundredweight each in prices for this raw material. This had produced a corresponding uplift at this time in the various grades of acetic acid, the 28 percent touching a basis of $3.88 per 100 pounds, whereas the glacial was held at $13.68. In the first ten months of last year ending with October the production of lime acetate gained some 8.7 percent to 116,817,000 pounds as contrasted with 107,516,000 pounds in the corresponding period of the preceding year. The shipments during the same period declined 4 percent to 115,688,000 pounds in contrast with 120,551,000 pounds in the corresponding period of the previous year. Canadian production of lime acetate increased during the same period 7.6 percent or from 7,608,000 pounds in 1928 to 8,186,000 pounds in 1929, while Canadian shipments fell off some 13.3 percent to 8,106,000 pounds as compared with 9,351,000 pounds in the corresponding preceding period.

Stocks of wood at the wood chemical plants in the United States at the end of October stood at 720,407 cords in contrast with 613,516 cords on the corresponding date in the preceding year, an increase of 17.4 percent, while stocks in Canada amounted to 42,137 cords, an increase of 9.6 percent over the 1928 totals of 38,447 cords. Throughout last year a decidedly strong condition of affairs prevailed in acetic acid due to the enormous requirements of lacquer materials manufacturers and the expanding consumption on the part of the textile trade and other consumers. Producers got behind in their deliveries of acetic acid during the early summer months and had not actually caught up with their schedules until quite late in the Fall. The wood plants which were only operating at about 60 percent of normal during the month of September were stepped up substantially during the late Fall months when producers were successful in disposing of the large accumulations of charcoal which had been noted. The consumption of raw material as well as acetic acid continued in record volume right up to the close of the year. The fact that the rank and file of consumers were holding no inventories of the raw material at the end of the year and that demand for the finished product was expected to be even larger in 1930 than it had been in the year before served to maintain a steady price basis as the year ended. In fact, British producers had arranged for the maintenance during 1930 of the quotations which they had been naming for glacial, technical and pure qualities during 1929.

More Demand for Alkalies

At the outset of 1929 the alkalies all appeared to be in a closely sold-up position. There had been no change in the contract schedules since the early part of 1928, it will be recalled, when producers had firmly established their prices at a concession of 2½c. to 5c. per 100 pounds from the previously ruling basis. The momentum gained by general trade and industry during the early months of the year prompted substantial shipments against the contracts which were outstanding. The hardware, soap, metallurgical, automotive, petroleum refining and other industries were all well represented in the takings against contracts. Individual shipments were frequently in large demand and commanded premiums of 5c. to 10c. per 100 pounds over the posted contract prices. The glass industry was one of the branches of manufacture which was going at top speed during the early months of 1929 and considerable quantities of soda ash were naturally absorbed by it. This industry utilized chiefly the dense variety although the same grade was also being taken in large volume in the production of enamels and glazes. So far as the light ash was concerned there was a record-breaking consumption in the manufacture of pulp and paper, soap, chemicals, drugs, shellac, paints, leathers, textiles and metals as well as in water softening, dyeing, purification of illuminating gases, and bottle and dish washing.

The use of caustic soda on the other hand was extended to include soaps and cleansing compounds, pulp, paper and paints, varnishes, dyestuffs, and in the refining of lead. It found a large application in the textile industry in the mercerizing of cottons, the manufacture of cotton textiles, rayons, refining of mineral and vegetable oils, metallurgical operations, rubber reclaiming, the canning industry, preparations of hypochlorite bleach, and in alkaline storage batteries. Liquid caustic soda containing 47 to 49 percent actual sodium hydroxide shipped in tank cars of about 9,200 gallons, was being marketed for the advantage of the larger consumers. The activities of petroleum refiners were especially marked during the early summer months when within a 45-day period they accepted as much caustic soda as they would ordinarily have taken in the course of a year. At the end of the half year, producers were agreed that shipments had eclipsed their most sanguine expectations and they were quite optimistic on the outlook for the remaining months of the year, principally on account of the record operations which were in progress in the iron and steel industry. All through the year foreign shipments were reaching totals which were quite satisfactory from the producer's standpoint. Up to the end of the first seven months of the year some 41,000,000 pounds of soda ash had been exported while the foreign shipments of caustic soda had amounted to 72,300,000 pounds. Early in October the conviction was gradually gaining ground that since the prevailing schedules for alkalies had been so satisfactory from the standpoint of consumers during 1929 the price basis would be continued into 1930. This did prove to be the case, for in late October and early November contracts were being accepted at the unchanged price basis. Just before the definite announcement of the extension of the contract price basis early in November the market for caustic soda took on a much firmer tone as there was very little free stock to be had from any direction.

One price development in the closing days of the year was the announcement that the less than car lot quotation for soda ash would be raised to the extent of 5c. to 7c. per 100 pounds so that producers were quoting 58 percent dense within the range of $2.37 to $2.57 per 100 pounds, in bags, and at $2.55 to $2.75 per 100 pounds, in barrels. The less than car lot quotation for the 58 percent light had been revised upward to $2.11 to $2.26 per 100 pounds in bags and $2.34 to $2.49 in barrels.

New Uses for Calcium Chloride

As early as February the producers of calcium chloride started to prepare for a season of active buying although the season did not actually get under way until around April. At this time there was some competition from the foreign which could be had at $2. per ton less than the domestic product. Road work was in full sway during May, June and July and shipments were perhaps larger than they had ever been before as the use of the product in the treatment of concrete roads, treatment of gravel roads, tennis courts, recreation fields, etc., for the prevention of dust and preservation of the treated surfaces was greater than ever. On the other hand the demand for the liquid product in refrigerating plants, automatic sprinkler systems, etc., was also gaining.

Competition from the foreign had been increasing and in June the domestic producers announced a reduction of $2.25 per ton which established the market for the flake at $22.75 per ton, car lots, works, drums, and a proportionate decline in the less than car lot quotation amounting to 11c. per 100 pounds, establishing it at $1.83 to $1.98 per 100 pounds. No change was made in the contract schedules for the solid. By the middle of July the bulk of the demand had been fairly well satisfied and shipments started to taper off. In the first seven months of the year upwards of 25,000,000 pounds of the chemical were exported. Several new uses for the product were opened up during the Fall months. It was being utilized to an increasing extent in the treatment of coal and coke for dust laying purposes. Late in the year still another new usage was found for the chemical in the removal of ice and snow. The new snow removal method was given a test here and it was found that the cost of snow removal was but $4. to $5. per city block. As the year closed the outlook for next season was regarded as highly promising as it was thought likely that the Federal Highways appropriation bill would run into $125,000,000 per year, as against $75,000,000 the year before, which meant that much larger quantities of the chemical would be required.

Chlorates for Weed Killing

Because of its wide application as a weed killer chlorate of soda last season enjoyed perhaps the biggest year in its history. The position was steady during the first three months of the year at 6½c. per pound basis. Demand from wheat growers was a feature. Early in the year the domestic could be had for ½c. per pound under the domestic, but shortages started developing as early as March and predictions were that there would be 40 percent less goods around than the market could conveniently absorb. In April an order for some 14,000 kegs was circulating and domestic producers placed an advance of ½c. per pound into effect quoting 7c. to 7½c. per pound kegs, works. During June and July arrangements were being made for importation of extensive quantities from Sweden and Germany some of this was purchased at as low as 3½c. to 6c. per pound and sold for what it would bring in the open market.

Germany's export trade in sodium chlorate for the first half of 1929 was over 40 percent more than the corresponding period of the previous year. The United States took nearly one-third of the total exports, amounting to 3,171 metric tons. Great Britain, Russia and Sweden were the other principal purchasers of this chemical.

Predictions of a shortage for the next season were heard as the year ended, but in this connection the American producer pointed out that he had largely increased his plant with a view of preventing the exceedingly high prices, which have been prevalent during the summer months for the past several years. This increased plant capacity has resulted in a make much in excess of what can be consumed in the usual industries, and at the end of the year the maker had on hand ready for immediate shipment many hundred tons of chlorate of soda. It was the domestic makers hope that he would be able to keep prices at normal levels throughout the entire year.

For the first eleven months of the year a relatively steady situation ruled in potash chlorate, but by November the shortage had become quite acute and foreign goods were advanced to the extent of ½c. to 1c. per pound to 8½c. to 9c. per pound. It developed that a shortage of power in France had curtailed the production. The low state of inventories shown by consumers at the end of the year was taken to indicate that another advance was in store.

Chlorine Under Pressure

The position of chlorine was quite well maintained during the first ten months of the year on the basis of 3c. per pound tanks, works. Textile and paper mills were taking large quantities of the product and the volume of contract withdrawals during the early part of the year was generally large. The bringing in of new production in the Pacific Northwest led to a rather substantial amount of price cutting during the summer months it was believed, although this did not begin to affect the Eastern markets until late in October when with the opening of a new contract season producers were no longer able to adhere to their former schedule, but announced a reduction of 15c. per 100 pounds to a basis of $2.85 in tank cars for 1930 contracts. Even this low basis could not be maintained and in December another 10c. cut was announced for the benefit of large buyers who were then able to secure their stock on contract on the basis of $2.75 per 100 pounds. There were continued signs of weakening as the year waned and at the end of the year the price was cut 25c. further to $2.50 per 100 pounds in ton lots.

No doubt overproduction had cut into the market to some extent, although it was noteworthy during the year that the product had largely supplanted bleaching powder for most purposes. In less than a decade chlorine had depreciated close to 300 percent in its selling price. At the time the producers were agitating for a lowering of freight rates which would enable them to market the product over a larger area and at the same time develop their production of caustic soda.

Widespread Call for Ammonias

Market conditions both in aqua and anhydrous ammonia were of the best throughout 1929. The 26 degrees aqua was maintained at 2½c. per pound tanks, works throughout the year. The effort in the early part of last year was to recover from some of the losses which had been sustained in anhydrous in the course of the keen competition which had been indulged in for a number of years previously on the part of the various manufacturers. Thus the price was raised to 14c. per pound in cylinders early in the year and this basis was being adhered to throughout the season of active demand when the product was finding so large an outlet in the production of artificial ice. The volume of shipments virtually doubled during April, May and

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June and in the height of the consuming season premiums of ½c. and more were being paid for the product in the outside market. It developed that only a small amount of natural ice had been marketed and this was responsible in no small measure for the strength which the product was displaying.

The campaign for 1930 contracts got under way in November when it was announced that effective January 1, the product would be advanced to the extent of 1½c. per pound. This established the market on the basis of 15½c. per pound, f.o.b. this city, in cylinders. The usual additional 6c. a pound for 50-pound cylinders was charged. The advance in schedules for the entire country was sweeping in its nature and established advances of 1c. to 2c. per pound, both in state-wide delivered prices as well as in quotations from stock points.

Alumina Chloride and Sulphate

Prominent Texas petroleum refiners were offering alumina chloride for shipments in quantities up to carload lots on the basis of 5c. per pound in lots of 40,000 pounds and up; 6c. for lots of 20,000 to 33,300 pounds; 7c. in lots of 10,000 to 17,200 pounds; 8c. in lots of 4,000 to 8,750 pounds; 9c. per pound in lots of 1,000 to 3,550 pounds, while smaller quantities commanded proportionate premiums up to 20c. per pound. The above prices were for bulk at Port Arthur, Texas containers extra.

Strikes in Eastern textile mills had interfered to some extent with the market for alumina sulphate in the early days of last year, but later in the year these interests went in for capacity production, and the outlet increased. Both the commercial and iron free varieties maintained a steady tone throughout the year. The producers of lead acetate placed an advance of 1c. per pound into effect early in the year, establishing the market for round quantities in barrels at 14c. per pound for white crystals, 14½c. for white broken, 14½c. for white granular, 14¾c. for powdered and 13c. per pound for brown broken. The differential between 100 pound kegs and barrels which had been ½c. per pound will henceforth be 1c. per pound over the bulk quotation. The advance in this chemical was evidently long overdue, for the price of metallic lead had previously been established at 6.65c. per pound spot, this city. The advance in the chemical came coincident with the elimination from the market of a number of smaller producers and the consequent removal of some of the competitive conditions which had been ruling.

Niter cake which was selling for as low as $3 to $4 per ton, and had actually been given away for the expense of loading took a sharp upturn last year when the price touched $15 to $17 per ton, as a result of the changed methods of nitric acid production. These prices were maintained to the end of the year as stocks were scarce throughout. Foreign fluorspar reflected the higher ocean transportation rates which had been placed into effect early last year, and an advance to $37 to $41 per ton took place in the 96 to 98 percent enameler's grade while the washed gravel 85 to 95 percent was being quoted at $16 per ton in cargo lots. Soda antimoniate was advanced to 13½c. to 14c. per pound in March as a result of an advance in antimony oxide. Copperas took a down turn early in the Spring when prices eased $1 per 100 pounds to $15 per ton, car lots, bags, $17 in car lots, barrels, and $14 per ton for bulk goods, while one of the largest producers quoted a minimum of $18 per ton, car lots, bags, and $20 to $21 per ton, car lots, barrels. Another producer quoted crystals at $1.30 per 100 pounds in bags and granular at $1.40.

Miscellaneous Group Changes

Foreign and domestic barium salts were competing actively in the early months of the year. The carbonate was quoted at $58 to $60 per ton, while at the Gulf as high as $62.50 to $64 per ton was being quoted. The cost of importing the foreign chloride had gotten up to $72 per ton. Later in the year the carbonate reacted to $58 to $60 per ton and the chloride was quoted at $63 to $65 per ton. In reflection of the record high price of 24c. per pound which was reached by metallic copper in April, there was a general advance in copper salts as of this date. Cyanide was raised 5c. to 55c. to 60c. per pound in barrels, carbonate, 2½c. to 21½c. to 25c. for the 52 to 54 percent, and 13c. per pound for the 18 to 20 percent, while chloride was raised 5c. to 26c. to 27c. per pound in barrels, and oxide 3½c. to 28c. to 29c. per pound. Soda sulphocyanide took an advance of 3c. in April to 32½c. per pound in 100-pound drums, and 42½c. per pound in tins.

Early in May the market for alums became disorganized through shortages in the lump descriptions. Producers advanced the ammonia to a basis of $3.60 to $3.85 per 100 pounds in barrels, and the potash to $3.25 to $3.50 as a result of scarcity. It was known, however, that from one manufacturer an offer of the potash lump was made at as low as $2.75 per 100 pounds f.o.b. the works in lots of 25 to 50 tons, while the foreign could be had for $3 to $3.12½ per 100 pounds. Later price schedules were again readjusted, the usual differentials between lump ground and powdered grades disappearing when the producers quoted ammonia ground at $3.60 to $3.75 per 100 pounds, powdered, $3.90, and lump at $3.60 to $3.85, while quoting the potash descriptions at 10c. less or $3.60 to $3.65 per 100 pounds for the ground, $3.50 to $3.75 for lump and $3.90 for powdered. Jobbers were maintaining a schedule of $3.60 to $3.65 per 100 pounds for ammonia lump, $3.45 to $3.70 for ground, and $3.65 to $3.90 for powdered, while quoting potash lump at $3.35 to $3.60 per 100 pounds, ground at $3.20 to $3.45, powdered at $3.40 to $3.65, and potash chrome alum at 5¼c. to 5½c. per pound.

Importations of potash salts fell off somewhat last year. In the first ten months of the year the imports were 305,695 tons, a loss of 1.6 percent. During the Fall a reduction of 1c. per pound was announced in caustic potash because of competition between foreign producers. This depressed the price basis for the 88 to 92 percent to the basis of 6⅛c. to 6⅜c. per pound in casks, while the 88 to 92 percent flake was lowered to $7.05 to $7.30 per 100 pounds. The flake in less than car lots was reduced to .07½c. to .08c. per pound in casks, while the foreign flake cauld be had for .06½c. to .06¾c. per pound, car lots, casks.

Phosphorus Salts Irregular

During the late Fall easier conditions developed in the various salts of phosphorus. The red was lowered to 37½c. to 42c. per pound, while yellow was off 4c. at 31c. to 37½c. per pound, oxychloride, 15c. at 20c. to 25c. per pound, and trichloride, 4c. at 31c. to 37½c. per pound. Some of the match manufacturers were able to cover their requirements at these prices, although others had to pay more. As a result of higher values placed on red prussiate of potash by foreign producers during the Fall of the year an advance of 1c. to 3c. to 40c. to 45c. per pound was named late in the year. The year ended with a readjustment in the prices for phosphorus, the red being advanced about 4c. per pound, while the sesquisulphide was reduced 6c. per pound.

The last week of the year found producers of phosphate of soda readjusting their contract schedules and quoting the technical dibasic in bags at a concession of ¼c. at $3 per 100 pounds, contracts, car lots, bags, and $3.10 for prompt shipment and at $3.15 contracts, car lots, barrels, and $3.25 per 100 pounds in barrels for prompt shipment. The tri-basic was being quoted on the basis of $3.60 per 100 pounds, car lots, bags, and $3.85 less car lots, bags, while in barrels the quotation stood at $3.75 per 100 pounds, car lots, and at $4 per 100 pounds for less than car lot quantities.

Urge Duty on Manganese Ore

Manganese ore was lowered somewhat in price during the course of the summer months. The 85 percent grade so generally utilized by the chemical trade was priced at 4c. to 4½c. per pound in barrels, while the 75 to 80 percent could be had for 2½c. per pound in barrels and the 80 to 85 percent grade at 3½c. per pound in barrels. At the same time prices for the chloride were shaded somewhat to include the range of 8c. per pound in barrels, and 9½c. per pound in jobbing quantities. The sulphate was lowered in the amount of 1c. per pound to 7c. to 8c. per pound in barrels while the anhydrous grade was quoted at 7¼c. to 8¼c. per pound in barrels. At the annual meeting of the American Manganese Producers' Association at Washington dissatisfaction was voiced over the rejection by the Senate Finance Committee of the proposal that manganese ores be placed on the free list. It was pointed out at the meeting that many new properties had been developed and that many new deposits had been discovered. The necessity for a protective tariff for the industry was stressed. A duty on all ores containing 10 percent or more manganese was urged.

Shipments of manganese ore containing 35 percent or more of metallic manganese increased about 30 percent last year to about 61,000 gross tons valued at $1,926,000 as compared with 46,860 gross tons valued at $1,214,153 in 1928. There was a record production of steel in 1929, estimated at 56,100,000 tons of ingots and castings compared with 51,544,180 tons in 1928, and a consequent demand for ferromanganese and in turn for manganese ore. The estimated production of ferromanganese in 1929 is given in the Iron Trade Review of January 2, 1930, as 333,800 tons, the largest output on record, compared with 319,770 tons in 1928. The rate of consumption of manganese ore in the manufacture of ferromanganese, as reported for 1928 by ferromanganese producers was 1,891 tons of ore per ton of product. At this rate the production of ferromanganese in 1929 would have required about 631,000 tons of ore. For this purpose the supply was ample, namely 60,000 tons of domestic high-grade ore plus 650,000 tons of imported ore minus about 45,000 to 50,000 tons diverted for "chemical" uses, a balance of 690,000 to 695,000 tons. The shipments of domestic ore containing from 10 to 35 percent of manganese (ferruginous manganese ore) in 1929 were 77,000 gross tons, valued at approximately $419,000, as compared with 90,581 tons, valued at $407,289 in 1928. The domestic shipments of ore containing from 5 to 10 percent of manganese (manganiferous iron ore) in 1929 were 1,100,000 tons, valued at $2,77-,000, as compared with 1,085,401 tons, valued at $2,645,145 in 1928. Reports emanating from the principal producing regions indicate that total world production for 1929 will exceed the 1928 figure. As a consumer of manganese the United States leads the world, with France, the United Kingdom, Belgium, German, and Japan following, usually in the order mentioned. It has been estimated that 92 percent of the manganese consumed by the industrial nations is used in the manufacture of steel; the remaining 8 percent by the chemical and ceramic industries.

Tin Weak Despite Restriction

There was a wide price swing in prices for metallic tin during the course of last year's trading, prices ranging from 53½c. to 38c. per pound. This produced similarly wide swings in quotations for the salts. The range for the oxide was from 56c. to 42c. per pound, and bichloride was quoted within the range of 15¾c. to 13¼c. per pound. The opening of the New York Metal Exchange during the year served to broaden the market for the metal. Formation of a world cartel of tin producers, with British interests as the nucleus, was one of the interesting developments during the year. One of the objects of the plan was to stabilize the price of the metal around a basis of 57½c. per pound. An active business developed on the metal exchange in tin following this news.

Over 167 British tin producing companies, controlling half of the world's metal, organized during the summer months and invitations to join were given Dutch and Bolivian producers. Early in the fall British interests were successful in coming to an agreement with Dutch producers. Later difficulty was met up with in persuading the different units to agree on a restriction program and the metal kept weakening in the meantime. One plan was that smelters should hold back 10 percent of the ore delivered to them; that they should be compensated for ore not smelted and the metal to be marketed should be sold at a price to be determined between the smelters and the association. Finally it developed that one important group of British companies in the Far East would cease production for twenty-four hours weekly. Co-operation in tin conservation appeared to be much closer at the end of the year than at any previous time. In fact Nigerian tin producers had recommended that members restrict production by 20 percent during the first quarter of 1930, which was in line with curtailment programs undertaken in Malaya and Bolivia.

Nickel Situation Steady

Throughout 1929 platers continued to support the market for nickel salts by extensive purchases. Prices were steady throughout the year and as the year ended contracts for 1930 deliveries were being accepted by producers both in the case of the single and the double salts at 13c. per pound. Nickel anodes were priced at from 45c. to 49c. per pound, as to test.

Throughout this period nickel in ingots was held at 35c. per pound. According to Canadian advises there was a slight gain in shipments of nickel oxide last year, although shipments of nickel in ore, matte and speiss, fell off. The record month for exports of fine nickel from Canada was June, 1929, when 7,287,100 pounds, valued at $1,818,852, were shipped, compared with a peak in 1928 of 5,372,300 pounds and in 1927 of 3,348,500 pounds. In nine months in 1929 was the record shipment for 1928 exceeded, and in no month last year did the figure fall below 5,000,000 pounds. During the past two years a much wider market for nickel and its products has existed than formerly.

Big Year in Insecticides

An unprecedented demand for calcium arsenate in the cotton belt stood out as one of the most interesting developments in the market for insecticides during the course of last year's trading. There was a jump in the price from 6c. to 10c. per pound, as producers could not foresee just what an extensive business was about to develop. It was the same story of the farmer waiting until the last minute to see how much damage had actually been done by the boll weevil. The fallacy that poison was not needed in dry weather was pointed to.

The sharply higher prices ruling on copper carbonate as a result of higher prices for the metal was one of the outstanding features of last year's market. The price touched 17½c. per pound early in the year but was later revised to take in the range of 13c. to 21½c. per pound, depending on quantity. In March an advance of 2½c. per pound was named in paris green by the producers, who quoted 25½c. per pound in bulk lots of over 200 pounds, with a 15 percent discount to jobbers. The advance was due to increase in the costs of various raw materials, including copper. The detailed schedule included 100-pound kegs, 27½c. per pound; 14 and 28-pound buckets, 29½c.; 2 and 5-pound packages, 31½c.; 1-pound packages, 33½c.; ¼-pound packages, 37½c. The producers had already disposed of fair-sized quantities.

Demand for lime sulphur and lead arsenate assumed rather large proportions early in April. A backward Spring kept consumers from covering requirements in all of the principal insecticides, however. There was a big movement in calcium arsenate in progress for the South during July, as a heavy precipitation in the South had led to a large weevil emergence. Poisoning was then quite generally resorted to and prices started to advance sharply. There was an advance to 7c. to 8c. per pound in the chemical during July, and in August the price got up to 8c. to 10c. per pound. The fight against the weevil and the army worm continued well past the Labor Day holidays, when considerable quantities of poison were still required.

Acid Prices Irregular

There was a period of weakness in the general run of acids during the Spring months, when the comparative index numbers for a list of twelve typical acids declined from 106.6 to 105.7. After holding steady at 106.2 during the Summer and Fall months, this index moved up to 106.8 at the close of the year, ranging as follows:—

Jan. 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
106.6	105.7	106.2	106.2	106.8

Throughout 1929 there was an insistent demand for all mineral acids from a varied assortment of trades and industries. The output of all mineral acids was stepped up early in the year to care for increasing demands. The scheduled prices for sulphuric acid were advanced in April because of the fact that the differential between tank cars and carboys had been too small. The 60 degrees was advanced 90c. per 100 pounds, while the 66 degrees was advanced 12½c. per 100 pounds. Cost of replacing drums was understood to be quite high. Heavy shipments of this acid were going through for the account of the usual consuming trades. The activity in the iron and steel lines and the large amounts which had been diverted to the fertilizer trades had strengthened the market.

Nitric acid remained in a firm position. Lactic acid was reduced ½c. to 1c. per pound in March, and the outlet at the reduced figure was reported as being larger.

With the arrival of warmer weather in April, the demand for citric and tartaric acids from bottlers and the soft drink trade showed a rather pronounced revival and general conditions were somewhat firmer. Acetic acid also started to tighten up at this time; as large quantities were being diverted to the lacquer materials manufacturers. A steady flow of orders was reaching the producer of tartaric acid during the summer months, although there remained room for improvement in the call for citric.

Throughout last year the Italian Camera Agrumaria had sold its calcium citrate at a minimum price of 550 lire per quintal. The Italian government's policy of restricting sales had resulted in a decrease in exports from Italy from 4,995,760 pounds for the period January 1 to September, 1927, to 3,973,620 pounds for the corresponding period of 1928. The cables from Palermo, as well as Messina, were to the general effect that stocks throughout Italy had been greatly reduced. Chromic acid was in constant demand throughout last year, but as the result of competition between the producers finally receded to a basis of 17½c. to 19c. per pound for the 99 percent in drums. Tannic acid was raised by the producers in the amount of 3c. per pound, establishing it at 90c. to 93c. per pound for the U.S.P. quality. An urgent demand continued for oxalic acid throughout the year and in the Fall months premiums were paid to secure prompt shipments. Car-lot sales were being made at 11c. to 11½c. per pound, and less than car-lot sales at from 12c. to 12½c. per pound. Foreign was commanding 12c. to 12½c. per pound in the Fall, and the scarcity was recognized by domestic producers, who raised their quotations to 11¼c. to 11½c. per pound.

Following a period of depression incident to the keen competition for business which had been staged by the various manufacturers, boric acid took a decided turn for the better last year. For the greater part of the year the price had stood at 5½c. per pound, but in November producers announced an advance of ¾c. per pound in their schedules, which established the mar-

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ket at 6½c. per pound, car lots. The new price for the refined crystals or granulated in sacks was $125 per ton, compared with $110 previously. The complete schedule included car lots of 30 tons or more, crystals or granulated, in sacks, $125 per ton; powdered, in paper-lined sacks, $132.50, crystals or granulated, in barrels, $135; refined powdered, $142.50; crystals or granulated, in kegs, $145; refined powdered, $152.50, f.o.b. any shipping point in the Eastern or Atlantic States, with $15 per ton advance over these prices quoted for the U.S.P. descriptions. The usual premiums were asked in ton lots or more, or in less than ton lots.

Industrial Chemicals: Record of Prices

Alum, Ammonia, Lump

October 18, 1871, the price was $2.15 per 100 pounds; 1881, $2.15; 1891, $1.50; 1901, $1.75; 1911, $1.75; 1913, $1.75; 1918, September, $8.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.25	$3.25	$3.25	$3.25
February	3.25	3.25	3.25	3.25
March	3.25	3.25	3.25	3.25
April	3.25	3.25	3.25	3.25
May	3.25	3.25	3.60	3.25
June	3.25	3.25	3.60	3.60
July	3.25	3.25	3.60	3.60
August	3.25	3.25	3.45	3.45
September	3.25	3.25	3.45	3.45
October	3.25	3.25	3.45	3.45
November	3.25	3.25	3.45	3.45
December	3.25	3.25	3.45	3.45
Year	3.25	3.25	3.60	3.25

Alumina Sulphate, Commercial

August 20, 1894, the price was $1.25 per 100 pounds; 1901, $1.35; 1911, 90c.; 1913, 90c.; 1917, November, $3.50.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.40	$1.40	$1.40	$1.40
February	1.40	1.40	1.40	1.40
March	1.40	1.40	1.40	1.40
April	1.40	1.40	1.40	1.40
May	1.40	1.40	1.40	1.40
June	1.40	1.40	1.40	1.40
July	1.40	1.40	1.40	1.40
August	1.40	1.40	1.40	1.40
September	1.40	1.40	1.40	1.40
October	1.40	1.40	1.40	1.40
November	1.40	1.40	1.40	1.40
December	1.40	1.40	1.40	1.40
Year	1.40	1.40	1.40	1.40

Alumina Sulphate, Iron-Free

August 20, 1894, the price was $1.75 per 100 pounds; 1901, $1.75; 1911, $1.75; 1913, $1.25; 1918, October, $4.50.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$2.00	$1.90	$1.95	$1.90
February	1.90	1.90	1.95	1.95
March	1.90	1.90	1.95	1.95
April	1.90	1.90	1.95	1.95
May	1.90	1.90	1.95	1.95
June	1.90	1.90	1.95	1.95
July	1.90	1.90	1.95	1.90
August	1.90	1.90	1.90	1.90
September	1.90	1.90	1.90	1.90
October	1.90	1.90	1.90	1.90
November	1.90	1.90	1.90	1.90
December	1.90	1.90	1.90	1.90
Year	2.00	1.90	1.95	1.90

Ammonia, Aqua, 26 Degrees

October 18, 1871, the price was 10¼c. to 11c. per pound; 1881, 9½c.; 1891, 9½c.; 1901, 5½c.; 1911, 4¾c.; 1913, 4¾c.; 1918, May, 30c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.02¼	$0.02¼	$0.02½	$0.02½
February	.02¼	.02¼	.02½	.02½
March	.02½	.02½	.02½	.02½
April	.02½	.02½	.02½	.02½
May	.02½	.02½	.02½	.02½
June	.02½	.02½	.02½	.02½
July	.02½	.02½	.02½	.02½
August	.02½	.02¼	.02½	.02½
September	.02½	.02½	.02½	.02½
October	.02½	.02½	.02½	.02½
November	.02½	.02½	02½	.02½
December	.02½	.02½	.02½	.02½
Year	.02½	.02¼	.02½	.02¼

Ammoniac, Sal, Lump

October 18, 1871, the price was 10c. to 10¼c. per pound; 1881, 11c. to 12c.; 1891, 8¼c. to 8½c.; 1901, 5¾c. to 6c.; 1911, 4¾c. to 6½c.; 1917, July, 22c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.10½	$0.10½	$0.10½	$0.10½
February	.10½	.10½	.10½	.10½
March	.10½	.10½	.10½	.10½
April	.10½	.10½	.10½	.10½
May	.10½	.10½	.10½	.10½
June	.10½	.10½	.10½	.10½
July	.10½	.10½	.10½	.10½
August	.10½	.10½	.10½	.10½
September	.10½	.10½	.10½	.10½
October	.10½	.10½	.10½	.10½
November	.10½	.10½	.10½	.10½
December	.10½	.10½	.10½	.10½
Year	.10½	.10½	.10½	.10½

Antimony, Needle

October 18, 1871, the price was 11¼c. per pound; 1881, 10¾c.; 1891, 8¼c.; 1901, 7¾c.; 1911, 5½c.; 1913, 4½c.; 1917, January, 20c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.13	$0.13	$0.12	$0.12
February	.13	.13	.12	.12
March	.13	.13	.12	.11½
April	.13	.13	.10	.10
May	.13	.13	.10	.10
June	.13	.13	.10	.10
July	.12	.12	.09½	.09½
August	.12	.12	.09½	.09½
September	.12	.12	.09½	.09½
October	.12	.12	.09½	.09½
November	.12	.12	.09½	.08¾
December	.12	.12	.09½	.09½
Year	.13	.12	.12	.08¾

Dessicated
Sodium Sulphate
OF EXCEPTIONAL PURITY
99-100% 99½%
FE 0-005% FE 0.001%

Epsom Salts
Technical and Medicinal

Quicksilver
Virgin in 76 lb. Flasks. Domestic and Imported

Mercurial Salts
Genuine
Quicksilver Vermilion
Cuprous Oxide
Genuine Electrolytic

Black Copper Oxide
Verdigris
Crystalline

F. W. BERK & CO., Inc.
99 JOHN STREET NEW YORK CITY
Telephone Beekman 4166

Argols, Crude, 30 Percent

October 18, 1871, the price was 6c. per pound; 1881, 4½c.; 1891, 2⅝c.; 1901, 2¼c.; 1913, 3c.; 1915, January, 18c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08	$0.08	$0.07½	$0.07½
February	.08	.08	.07½	.07½
March	.09½	.08	.07½	.07½
April	.09½	.09½	.07½	.07½
May	.09½	.09½	.07½	.07½
June	.09½	.09½	.07½	.07½
July	.09½	.09½	.07½	.07½
August	.09½	.09½	.07½	.07½
September	.09½	.07½	.07½	.07½
October	.07½	.07½	.07½	.07½
November	.07½	.07½	.07½	.07½
December	.07½	.07½	.07½	.07½
Year	.09½	.07½	.07½	.07½

Arsenic, Red

October 18, 1871, the price was 5½c. per pound; 1881, 5¾c.; 1891, 5c.; 1901, 7c.; 1911, 6¼c.; 1913, 5¾c.; 1916, December, 70c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09	$0.09	$0.09	$0.09
February	.09	.09	.09½	.09
March	.09	.09	.09½	.09½
April	.09½	.09	.09½	.09½
May	.09½	.09½	.09½	.09½
June	.09½	.09½	.09½	.09¼
July	.09½	.09½	.09½	.09½
August	.09½	.09½	.09½	.09½
September	.09½	.09½	.09½	.09½
October	.09½	.09	.09½	.09½
November	.09	.09	.09½	.09½
December	.09	.09	.09½	.09½
Year	.09½	.09	.09½	.09½

Arsenic, White

October 18, 1871, the price was 1⅞c. per pound; 1881, 2¾c. to 3½c.; 1891, 2⅝c. to 3c.; 1901, 3⅜c. to 3⅞c.; 1911, 2¼c. to 2⅝c.; 1913, 3½c.; 1917, May, 20c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.04	$0.04	$0.04	$0.04
February	.04	.04	.04	.04
March	.04	.04	.04	.04
April	.04	.04	.04	.04
May	.04	.04	.04	.04
June	.04	.04	.04	.04
July	.04	.04	.04	.04
August	.04	.04	.04	.04
September	.04	.04	.04	.04
October	.04	.04	.04	.04
November	.04	.04	.04	.04
December	.04	.04	.04	.04
Year	.04	.04	.04	.04

Twenty-three Years' Prices

	Per pound	
	H.	L.
1907	$0.08¼	$0.05¾
1908	.06	.03
1909	.03¼	.02⅜
1910	.03¼	.02¼
1911	.02⅜	.01½
1912	.05½	.02⅜
1913	.05	.03
1914	.05	.02⅞
1915	.04½	.03½
1916	.08¼	.03⅞
1917	.20	.08
1918	.17½	.09
1919	.12	.08
1920	.16¼	.10½
1921	.10¾	.05½
1922	.15½	.05½
1923	.16	.09¾
1924	.13½	.06
1925	.06¼	.03½
1926	.03½	.03½
1927	.04	.03¾
1928	.04	.04
1929	.04	.04

Barium, Chloride

August 20, 1906, the price was $33.50 per ton; October 18, 1911, $31.50; 1913, $33; 1916, February, $140.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$48.00	$48.00	$63.00	$63.00
February	56.00	55.00	63.00	63.00
March	55.00	54.00	65.00	63.00
April	55.00	54.00	65.00	65.00
May	55.00	55.00	65.00	65.00
June	56.00	55.00	65.00	65.00
July	60.00	57.00	65.00	63.00
August	60.00	57.00	63.00	63.00
September	63.00	60.00	63.00	63.00
October	63.00	63.00	63.00	63.00
November	63.00	63.00	63.00	63.00
December	63.00	63.00	63.00	63.00
Year	63.00	48.00	65.00	63.00

Bleaching Powder

October 18, 1871, the price was $3.50 per 100 pounds; 1881, $1.07; 1891, $2.25; 1901, $1.75; 1911, $1.50; 1913, $1.25; 1916, January, $14.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$2.00	$2.00	$2.00	$2.00
February	2.00	2.00	2.00	2.00
March	2.00	2.00	2.00	2.00
April	2.00	2.00	2.00	2.00
May	2.00	2.00	2.00	2.00
June	2.00	2.00	2.00	2.00
July	2.00	2.00	2.00	2.00
August	2.00	2.00	2.00	2.00
September	2.00	2.00	2.00	2.00
October	2.00	2.00	2.00	2.00
November	2.00	2.00	2.00	2.00
December	2.00	2.00	2.00	2.00
Year	2.00	2.00	2.00	2.00

Blue Vitriol, 99 Percent (*Copper Sulphate*)

October 18, 1871, the price was $10.50 per 100 pounds; 1881, $6.50 to $7; 1891, $3.50 to $3.75; 1901, $4.75 to $4.90; 1911, $4.50 to $4.75; 1913, $5; 1916, January, $23.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$5.05	$5.05	$5.65	$5.50
February	5.05	5.05	5.80	5.65
March	5.05	5.05	6.65	6.20
April	5.15	5.05	7.00	6.00
May	5.30	5.15	6.00	6.00
June	5.30	5.30	6.00	6.00
July	5.30	5.30	6.00	6.00
August	5.30	5.30	6.00	6.00
September	5.30	5.30	6.00	6.00
October	5.30	5.30	6.00	5.50
November	5.50	5.30	5.50	5.50
December	5.50	5.50	5.50	5.50
Year	5.50	5.05	7.00	5.50

Brimstone

October 18, 1871, the price was $33.50 per ton; 1881, $31 to $32; 1891, $29 to $30; 1901, $24 to $28; 1911, $22 to $22.50; 1913, $22; 1917, February, $45.

(Price at mines)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$18.00	$18.00	$18.00	$18.00
February	18.00	18.00	18.00	18.00
March	18.00	18.00	18.00	18.00
April	18.00	18.00	18.00	18.00
May	18.00	18.00	18.00	18.00
June	18.00	18.00	18.00	18.00
July	18.00	18.00	18.00	18.00
August	18.00	18.00	18.00	18.00
September	18.00	18.00	18.00	18.00
October	18.00	18.00	18.00	18.00
November	18.00	18.00	18.00	18.00
December	18.00	18.00	18.00	18.00
Year	18.00	18.00	18.00	18.00

Calcium Acetate

In 1871 the price was $6.35 per 100 pounds; 1881, $3.60; 1891, $1.90; 1901, $1.55; 1913, $2; 1916, January, $7.05.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.50	$3.50	$4.50	$4.50
February	3.50	3.50	4.50	4.50
March	3.50	3.50	4.50	4.50
April	3.50	3.50	4.50	4.50
May	3.50	3.50	4.50	4.50
June	3.50	3.50	4.50	4.50
July	3.50	3.50	4.50	4.50
August	4.00	3.50	4.50	4.50
September	4.00	4.00	4.50	4.50
October	4.00	4.00	4.50	4.50
November	4.50	4.50	4.50	4.50
December	4.50	4.50	4.50	4.50
Year	4.50	3.50	4.50	4.50

Twenty-five Years' Prices

	Per 100 pounds	
	H.	L.
1905	$2.35	$2.00
1906	2.40	2.35
1907	2.55	2.25
1908	2.30	1.50
1909	2.05	1.50
1910	2.05	2.00
1911	2.05	1.75
1912	2.55	2.25
1913	2.55	2.00
1914	2.05	1.50
1915	6.10	2.00
1916	7.05	3.50
1917	6.05	3.50
1918	6.05	3.00
1919	3.05	2.00
1920	3.50	2.00
1921	2.00	1.50
1922	3.50	1.75
1923	4.00	3.50
1924	4.00	3.00
1925	3.25	2.75
1926	3.50	3.25
1927	3.50	3.50
1928	4.50	3.50
1929	4.50	4.50

Calcium Arsenate

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.06½	$0.06½	$0.06½	$0.06½
February	.06½	.06½	.06½	.06½
March	.06½	.06½	.06½	.06½
April	.06½	.06½	.06½	.06½
May	.06½	.06½	.06½	.06½
June	.06½	.06½	.06½	.06½
July	.06	.06	.07	.07
August	.06	.06	.07	.07
September	.06	.06	.07	.07
October	.07	.06	.07	.07
November	.07	.07	.08	.08
December	.07	.07	.08	.08
Year	.07	.06	.08	.06½

Calcium Carbide

In 1900, when first introduced on a large scale, the price was $5.50 per 100 pounds; 1918, July, $16.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$5.00	$5.00	$5.00	$5.00
February	5.00	5.00	5.00	5.00
March	5.00	5.00	5.00	5.00
April	5.00	5.00	5.00	5.00
May	5.00	5.00	5.00	5.00
June	5.00	5.00	5.00	5.00
July	5.00	5.00	5.00	5.00
August	5.00	5.00	5.00	5.00
September	5.00	5.00	5.00	5.00
October	5.00	5.00	5.00	5.00
November	5.00	5.00	5.00	5.00
December	5.00	5.00	5.00	5.00
Year	5.00	5.00	5.00	5.00

Carbon Tetrachloride

In January, 1911, the price was 7½c. per pound; October 18, 1913, 7¾c.; 1918, October, 45c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.06¾	$0.06¾	$0.06¼	$0.06¼
February	.06¾	.06¾	.06¼	.06¼
March	.06¾	.06¾	.06¼	.06¼
April	.06¾	.06¼	.06¼	.06¼
May	.06¼	.06¼	.06¼	.06¼
June	.06¼	.06¼	.06¼	.06¼
July	.06¼	.06¼	.06¼	.06¼
August	.06¼	.06¼	.06¼	.06¾
September	.06¼	.06¼	.06¼	.06¼
October	.06¼	.06¼	.06¼	.06¼
November	.06¼	.06¼	.06¼	.06¾
December	.06¼	.06¼	.06¼	.06¾
Year	.06¾	.06¼	.06¼	.06¾

Chlorine, Liquid

In 1907, when it was first introduced, the price was 25c. per pound; October 18, 1911, 15c.; 1918, June, 22c.

(In tanks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.03¾	$0.03¾	$0.03	$0.03
February	.03¾	.03¾	.03	.03
March	.03¾	.03¾	.03	.03
April	.03¾	.03¾	.03	.03
May	.03¾	.03¾	.03	.03
June	.03¾	.03¾	.03	.03
July	.03¾	.03¾	.03	.03
August	.03½	.03½	.03	.03
September	.03½	.03½	.03	.03
October	.03½	.03	.03	.0285
November	.03	.03	*2.85	2.85
December	.03	.03	*2.75	2.75
	Per pound			
Year	.03¾	.03	.03	.02¾

* Per 100 pounds.

Copperas (*Iron Sulphate*)

October 18, 1871, the price was $8.50 per 100 pounds; 1881, 60c.; 1891, 80c.; 1901, 30c.; 1911, 60c.; 1913, 70c.; 1918, December, $2.50.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$13.00	$13.00	$13.00	$13.00
February	13.00	13.00	13.00	13.00
March	13.00	13.00	14.00	13.00
April	13.00	13.00	13.00	13.00
May	13.00	13.00	13.00	13.00
June	13.00	13.00	13.00	13.00
July	13.00	13.00	13.00	13.00
August	13.00	13.00	13.00	13.00
September	13.00	13.00	13.00	13.00
October	13.00	13.00	13.00	13.00
November	13.00	13.00	13.00	13.00
December	13.00	13.00	13.00	13.00
Year	13.00	13.00	14.00	13.00

Ethyl Acetate, Technical

(In tanks)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.85	$0.85	$1.00	$1.00
February	.85	.85	1.00	1.00
March	.80	.80	1.00	1.00
April	.80	.80	1.00	.95
May	.80	.80	.95	.95
June	.82	.82	.90	.90
			Per pound	
July	.82	.82	12.2	12.2
August	.87	.82	12.2	12.2
September	.87	.87	12.2	12.2
October	.87	.87	12.2	12.2
November	1.00	.92	12.2	11.5
December	1.00	1.00	11.5	10.6
Year	1.00	.80	...	...

Fluorspar, Washed Gravel, 85 Percent

December 16, 1918, the price was $90 per ton.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$22.00	$22.00	$18.00	$18.00
February	22.00	22.00	18.00	18.00
March	22.00	22.00	18.00	18.00
April	22.00	22.00	18.00	18.00
May	22.00	22.00	18.00	18.00
June	22.00	22.00	18.00	18.00
July	17.00	17.00	18.00	18.00
August	17.00	17.00	18.00	18.00
September	17.00	17.00	18.00	18.00
October	17.00	17.00	18.00	18.00
November	18.00	17.00	18.00	18.00
December	18.00	18.00	18.00	18.00
Year	22.00	17.00	18.00	18.00

Glauber's Salt

October 18, 1871, the price was $2.10 per 100 pounds; 1881, $1.10; 1891, $1.15; 1901, 90c.; 1911, 75c.; 1913, 60c.; 1918, July, $3.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.70	$0.70	$0.70	$0.70
February	.70	.70	.70	.70
March	.70	.70	.70	.70
April	.70	.70	.70	.70
May	.70	.70	.70	.70
June	.70	.70	.70	.70
July	.70	.70	.70	.70
August	.70	.70	.70	.70
September	.70	.70	.70	.70
October	.70	.70	.70	.70
November	.70	.70	.70	.70
December	.70	.70	.70	.70
Year	.70	.70	.70	.70

Lead, Acetate, Brown, Broken

October 18, 1871, the price was 10¾c. per pound; 1881, 8½c.; 1891, 6¼c.; 1901, 6c.; 1911, 7¾c.; 1913, 7¾c.; 1918, March, 17c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.12	$0.12	$0.12	$0.12
February	.12	.12	.13	.13
March	.12	.12	.13	.13
April	.12	.12	.13	.13
May	.12	.12	.13	.13
June	.12	.12	.13	.13
July	.12	.12	.13	.13
August	.12	.12	.13	.13
September	.12	.12	.13	.13
October	.12	.12	.13	.13
November	.12	.12	.13	.13
December	.12	.12	.13	.13
Year	.12	.12	.13	.12

Nickel Salt, Single

September 11, 1901, the price was 15c. per pound; October 18, 1901, 10½c.; 1911, 13c.; 1913, 12c.; 1918, September, 17c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.10½	$0.10½	$0.13	$0.13
February	.10½	.10½	.13	.13
March	.10½	.10½	.13	.13
April	.10½	.10½	.13	.13
May	.10¼	.10¼	.13	.13
June	.10½	.10½	.13	.13
July	.10½	.10½	.13	.13
August	.10½	.10½	.13	.13
September	.10½	.10½	.13	.13
October	.10½	.10½	.13	.13
November	.10½	.10½	.13	.13
December	.13	.10½	.13	.13
Year	.13	.10½	.13	.13

Phosphorus, Red

October 18, 1871, the price was $1.15 per pound; 1881, 58c.; 1891, 65c.; 1901, 60c.; 1911, 50c.; 1913, 50c.; 1918, January, $1.70.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.60	$0.60	$0.55	$0.55
February	.60	.60	.55	.55
March	.60	.60	.55	.55
April	.60	.60	.55	.55
May	.60	.60	.55	.55
June	.60	.60	.55	.55
July	.55	.55	.55	.55
August	.55	.55	.55	.55
September	.55	.55	.55	.55
October	.55	.55	.55	.37½
November	.55	.55	.37½	.37½
December	.55	.55	.42	.37½
Year	.60	.55	.55	.37½

Phosphorus, Yellow

October 18, 1871, the price was $1.10 per pound; 1881, 55c.; 1891, 60c.; 1901, 45c.; 1911, 45c.; 1913, 45c.; 1918, January, $2.10.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.32	$0.32	$0.35	$0.35
February	.32	.32	.35	.35
March	.32	.32	.35	.35
April	.32	.32	.35	.35
May	.32	.32	.35	.35
June	.32	.32	.35	.35
July	.35	.35	.35	.35
August	.35	.35	.35	.35
September	.35	.35	.35	.35
October	.35	.35	.35	.31
November	.35	.35	.31	.31
December	.35	.35	.31	.31
Year	.35	.32	.35	.31

Potash, Carbonate, Calcined, 80 to 85 Percent

October 18, 1871, the price was 15c. per pound; 1881, 6½c.; 1891, 5c.; 1901, 4½c.; 1911, 3½c.; 1913, 3¼c.; 1917, November, 70c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05⅝	$0.05⅝	$0.05⅝	$0.05⅝
February	.05⅝	.05⅝	.05⅝	.05⅝
March	.05⅝	.05⅝	.05⅝	.05⅝
April	.05⅝	.05⅝	.05⅝	.05⅝
May	.05⅝	.05⅝	.05⅝	.05⅝
June	.05⅝	.05⅝	.05⅝	.05⅝
July	.05⅝	.05⅝	.05⅝	.05⅝
August	.05⅝	.05⅝	.05⅝	.05⅝
September	.05⅝	.05⅝	.05⅝	.05⅝
October	.05⅝	.05⅝	.05⅝	.05⅝
November	.05⅝	.05⅝	.05⅝	.05⅝
December	.05⅝	.05⅝	.05⅝	.05⅝
Year	.05⅝	.05⅝	.05⅝	.05⅝

Potash, Caustic, 88 to 92 Percent

October 18, 1871, the price was 7¼c. per pound; 1881, 6c.; 1891, 6¾c.; 1901, 6c.; 1911, 3¾c.; 1913, 4c.; 1916, February, $1.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07⅛	$0.07⅛	$0.07⅛	$0.07⅛
February	.07⅛	.07⅛	.07⅛	.07⅛
March	.07⅛	.07⅛	.07⅛	.07⅛
Apr.l	.07⅛	.07⅛	.07⅛	.07⅛
May	.07⅛	.07⅛	.07⅛	.07⅛
June	.07⅛	.07⅛	.07⅛	.07⅛
July	.07⅛	.07⅛	.07⅛	.07⅛
August	.07⅛	.07⅛	.07⅛	.07⅛
September	.07⅛	.07⅛	.07⅛	.07⅛
October	.07⅛	.07⅛	.06⅛	.0?⅛
November	.07⅛	.07⅛	.06⅛	.06⅛
December	.07⅛	.07⅛	.06⅛	.06⅛
Year	.07⅛	.07⅛	.07⅛	.06⅛

Potash, Chlorate

October 18, 1871, the price was 55c. per pound; 1881, 15⅝c.; 1891, 10⅞c.; 1901, 8¼c.; 1911, 8¼c.; 1913, 8¼c.; 1916, March, 75c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07⅝	$0.07½	$0.07½	$0.07½
February	.07⅝	.07⅝	.07⅝	.07½
March	.07⅝	.07½	.07½	.07½
April	.07½	.07½	.07½	.07½
May	.07½	.07½	.07½	.07½
June	.08	.07½	.07½	.07½
July	.08	.06½	.07½	.07½
August	.07½	.07¾	.07½	.07½
September	.07½	.06½	.07½	.07½
October	.07½	.06½	.07½	.07½
November	.07½	.06½	.07½	.07½
December	.07½	.07½	.08½	.08½
Year	.08	.06½	.08½	.08½

Potash, Permanganate, Technical

In 1901 the price was 9c. to 11c.; October 18, 1911, 8¾c.; 1913, 9¾c.; 1918, September, $2.25.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.15	$0.16	$0.16
February	.15	.15	.16	.16
March	.15	.15	.16	.16
April	.15	.15	.16	.16
May	.15	.14½	.16	.16
June	.14½	.14½	.16	.16
July	.15	.15	.16	.16
August	.15	.15	.16	.16
September	.15	.15	.16	.16
October	.15	.15	.16	.16
November	.15	.15	.16	.16
December	.16	.15	.16	.16
Year	.16	.14½	.16	.16

Salt Cake, Ground (Barrels)

In October, 1881, the price was $18 per ton; October 18, 1891, $15; 1901, $15; 1911, $12; 1913, $11.50; 1920, August, $80.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$21.00	$21.00	$21.00	$21.00
February	21.00	21.00	23.00	21.00
March	21.00	21.00	23.00	23.00
April	21.00	21.00	23.00	23.00
May	21.00	21.00	23.00	23.00
June	21.00	21.00	23.00	23.00
July	21.00	21.00	23.00	23.00
August	21.00	21.00	23.00	23.00
September	21.00	21.00	23.00	23.00
October	21.00	21.00	23.00	23.00
November	21.00	21.00	25.00	25.00
December	21.00	21.00	25.00	25.00
Year	21.00	21.00	25.00	21.00

Saltpeter, Crystals

September 16, 1879, the price was 6c. per pound; October 18, 1881, 7c.; 1891, 6¾c.; 1901, 4¼c.; 1911, 4¾c.; 1913, 6½c.; 1916, January, 38c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07¼	$0.07¼	$0.07¼	$0.07¼
February	.07¼	.07¼	.07¼	.07¼
March	.07¼	.07¼	.07¼	.07¼
April	.07¼	.07¼	.07¼	.07¼
May	.07¼	.07¼	.07¼	.07¼
June	.07¼	.07¼	.07¼	.07¼
July	.07¼	.07¼	.07¼	.07¼
August	.07¼	.07¼	.07¼	.07¼
September	.07¼	.07¼	.07¼	.07¼
October	.07¼	.07¼	.07¼	.07¼
November	.07¼	.07¼	.07¼	.07¼
December	.07¼	.07¼	.07¼	.07¼
Year	.07¼	.07¼	.07¼	.07¼

Soda Ash, Light, 58 Percent

(In bags)

October 18, 1871, the price was $2.70 per 100 pounds; 1881, $1.50; 1891, $1.60; 1901, 85c.; 1911, 80c.; 1913, 85c.; 1916, February, $4.50.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.32	$1.32	$1.32	$1.32
February	1.32	1.32	1.32	1.32
March	1.32	1.32	1.32	1.32
April	1.32	1.32	1.32	1.32
May	1.32	1.32	1.32	1.32
June	1.32	1.32	1.32	1.32
July	1.32	1.32	1.32	1.32
August	1.32	1.32	1.32	1.32
September	1.32	1.32	1.32	1.32
October	1.32	1.32	1.32	1.32
November	1.32	1.32	1.32	1.32
December	1.32	1.32	1.32	1.32
Year	1.32	1.32	1.32	1.32

Soda, Bicarbonate

October 18, 1871, the price was $4.50 per 100 pounds; 1881, $3.70; 1891, $3.25; 1901, 95c.; 1911, $2.75; 1913, $1; 1918, October, $4.50.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.90	$1.90	$2.00	$2.00
February	1.90	1.90	2.00	2.00
March	1.90	1.90	2.00	2.00
April	1.90	1.90	2.00	2.00
May	1.90	1.90	2.00	2.00
June	2.00	1.90	2.00	2.00
July	2.00	2.00	2.00	2.00
August	2.00	2.00	2.00	2.00
September	2.00	2.00	2.00	2.00
October	2.00	2.00	2.00	2.00
November	2.00	2.00	2.00	2.00
December	2.00	2.00	2.00	2.00
Year	2.00	1.90	2.00	2.00

Soda, Caustic, 76 Percent Solid

October 18, 1871, the price was $4.88 per 100 pounds; 1881, $3.75; 1891, $1.55; 1901, $1.95; 1911, $1.80; 1913, $1.75; 1917, September, $10.70.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.90	$2.90	$2.90	$2.90
February	2.90	2.90	2.90	2.90
March	2.90	2.90	2.90	2.90
April	2.90	2.90	2.90	2.90
May	2.90	2.90	2.90	2.90
June	2.90	2.90	2.90	2.90
July	2.90	2.90	2.90	2.90
August	2.90	2.90	2.90	2.90
September	2.90	2.90	2.90	2.90
October	2.90	2.90	2.90	2.90
November	2.90	2.90	2.90	2.90
December	2.90	2.90	2.90	2.90
Year	2.90	2.90	2.90	2.90

Soda, Chlorate

October 18, 1871, the price was 40c. per pound; 1881, 15½c.; 1891, 10½c.; 1901, 7¾c.; 1911, 8c.; 1913, 8¼c.; 1916, February, 35c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06½	$0.06½	$0.06½	$0.06½
February	.06½	.06½	.06½	.06½
March	.06½	.05¾	.06½	.06½
April	.05¾	.05¾	.07	.07
May	.05¾	.05¾	.07	.07
June	.05¾	.05¾	.07½	.07½
July	.05¾	.05¾	.07½	.07½
August	.05¾	.05¾	.07½	.07½
September	.05¾	.05¾	.07½	.07½
October	.05¾	.05¾	.07½	.07½
November	.05¾	.05¾	.07½	.07½
December	.06½	.05¾	.07½	.07½
Year	.06½	.05¾	.07½	.06½

Soda, Cyanide

October 18, 1913, the price was 25c.; 1917, January, $2.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.17	$0.17	$0.17	$0.17
February	.17	.17	.17	.17
March	.17	.17	.17	.17
April	.17	.17	.17	.17
May	.17	.17	.17	.17
June	.17	.17	.17	.17
July	.17	.17	.17	.17
August	.17	.17	.17	.17
September	.17	.17	.17	.17
October	.17	.17	.17	.17
November	.17	.17	.17	.17
December	.17	.17	.17	.17
Year	.17	.17	.17	.17

Soda, Nitrite, 96 to 98 Percent

Not quoted prior to August, 1917, when price was 44c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.07¼	$0.07¼	$0.07¼	$0.07¼
February	.07¼	.07¼	.07¼	.07¼
March	.07¼	.07¼	.07¼	.07¼
April	.07¼	.07¼	.07¼	.07¼
May	.07¼	.07¼	.07¼	.07¼
June	.07¼	.07¼	.07¼	.07¼
July	.07¼	.07¼	.07¼	.07¼
August	.07¼	.07¼	.07¼	.07¼
September	.07¼	.07¼	.07¼	.07¼
October	.07¼	.07¼	.07¼	.07¼
November	.07¼	.07¼	.07¼	.07¼
December	.07¼	.07¼	.07¼	.07¼
Year	.07¼	.07¼	.07¼	.07¼

Soda, Hyposulphite, Ordinary

October 18, 1871, the price was $9 per 100 pounds; 1881, $4.50; 1891, $2; 1901, $1.80; 1911, $1.30; 1913, $1.30; 1918, November, $4.10.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.40	$2.40	$2.40	$2.40
February	2.40	2.40	2.40	2.40
March	2.40	2.40	2.40	2.40
April	2.40	2.40	2.40	2.40
May	2.40	2.40	2.40	2.40
June	2.40	2.40	2.40	2.40
July	2.40	2.40	2.40	2.40
August	2.40	2.40	2.40	2.40
September	2.40	2.40	2.40	2.40
October	2.40	2.40	2.40	2.40
November	2.40	2.40	2.40	2.40
December	2.40	2.40	2.40	2.40
Year	2.40	2.40	2.40	2.40

Soda, Phosphate, Commercial

October 18, 1871, the price was 30c. per pound; 1881, 20c.; 1891, 22c.; 1901, 2¼c.; 1911, 2¼c.; 1913, 2¼c.; 1918, January, 7c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.03¼	$0.03¼	$0.03¼	$0.03¼
February	.03¼	.03¼	.03¼	.03¼
March	.03¼	.03¼	.03¼	.03¼
April	.03¼	.03¼	.03¼	.03¼
May	.03¼	.03¼	.03¼	.03¼
June	.03¼	.03¼	.03¼	.03¼
July	.03¼	.03¼	.03¼	.03¼
August	.03¼	.03¼	.03¼	.03¼
September	.03¼	.03¼	.03¼	.03¼
October	.03¼	.03¼	.03¼	.03¼
November	.03¼	.03¼	.03¼	.03¼
December	.03¼	.03¼	.03¼	.03¼
Year	.03¼	.03¼	.03¼	.03¼

Soda, Sal

October 18, 1871, the price was $1 per 100 pounds; 1881, $1.10; 1891, $1.05; 1901, 60c.; 1911, 65c.; 1913, 60c.; 1918, November, $2.50.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.90	$0.90	$1.00	$1.00
February	.90	.90	1.00	1.00
March	.90	.90	1.00	.90
April	.90	.90	.90	.90
May	.90	.90	.90	.90
June	1.00	.90	.90	.90
July	1.00	1.00	.90	.90
August	1.00	1.00	.90	.90
September	1.00	1.00	.90	.90
October	1.00	1.00	.90	.90
November	1.00	1.00	.90	.90
December	1.00	1.00	.90	.90
Year	1.00	.90	1.00	.90

Soda, Silicate, 60 Degrees

January 14, 1901, the price was $2 per 100 pounds; October 18, 1911, $2; 1913, $2; 1918, October, $8.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.65	$1.65	$1.65	$1.65
February	1.65	1.65	1.65	1.65
March	1.65	1.65	1.65	1.65
April	1.65	1.65	1.65	1.65
May	1.65	1.65	1.65	1.65
June	1.65	1.65	1.65	1.65
July	1.65	1.65	1.65	1.65
August	1.65	1.65	1.65	1.65
September	1.65	1.65	1.65	1.65
October	1.65	1.65	1.65	1.65
November	1.65	1.65	1.65	1.65
December	1.65	1.65	1.65	1.65
Year	1.65	1.65	1.65	1.65

Soda, Silicate, 40 Degrees

(In drums)

January 14, 1901, the price was $1 per 100 pounds; October 18, 1911, 65c.; 1913, 60c.; 1918, October, $3.50.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.65	$0.65	$0.70	$0.70
February	.65	.65	.70	.70
March	.65	.65	.70	.70
April	.65	.65	.70	.70
May	.65	.65	.70	.70
June	.65	.65	.70	.70
July	.65	.65	.70	.70
August	.65	.65	.70	.70
September	.65	.65	.70	.70
October	.70	.70	.70	.70
November	.70	.70	.70	.70
December	.70	.70	.70	.70
Year	.70	.65	.70	.70

Soda, Sulphide, 60 Percent

September 21, 1911, the price was $2.50 per 100 pounds; 1913, $2.50; 1918, November $12.

Per hundredweight

	1928. H.	1928. L.	1929. H.	1929. L.
January	$3.75	$3.75	$3.25	$3.25
February	3.75	3.75	3.25	3.25
March	3.75	3.75	3.25	3.25
April	3.75	3.75	3.25	3.25
May	3.50	3.50	3.25	3.25
June	3.50	3.50	3.25	3.25
July	3.25	3.25	3.25	3.25
August	3.25	3.25	3.25	3.25
September	3.25	3.25	3.25	3.25
October	3.50	3.50	3.25	3.00
November	3.50	3.25	3.00	3.00
December	3.25	3.25	3.00	3.00
Year	3.75	3.25	3.25	3.00

Soda Sulphide, 30 Percent

September 21, 1911, the price was $1.50 per 100 pounds; 1913, $1.50; 1918, October, $7.

Per hundredweight

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.35	$2.35	$2.25	$2.25
February	2.35	2.35	2.25	2.25
March	2.35	2.35	2.25	2.25
April	2.35	2.35	2.25	2.25
May	2.10	2.10	2.25	2.25
June	2.10	2.10	2.25	2.25
July	2.10	2.10	2.25	2.25
August	2.10	2.10	2.25	2.25
September	2.10	2.10	2.25	2.25
October	2.10	2.10	2.25	2.25
November	2.25	2.10	2.25	2.25
December	2.25	2.25	2.25	2.25
Year	2.35	2.10	2.25	2.25

Soda, Sulphite, Crystals

October 18, 1871, the price was 29c. per pound; 1891, 2dc.; 1901, 5¼c.; 1911, 2¾c.; 1913, 2¼c.; 1916, January, 6c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.03	$0.03	$0.03	$0.03
February	.03	.03	.03	.03
March	.03	.03	.03	.03
April	.03	.03	.03	.03
May	.03	.03	.03	.03
June	.03	.03	.03	.03
July	.03	.03	.03	.03
August	.03	.03	.03	.03
September	.03	.03	.03	.03
October	.03	.03	.03	.03
November	.03	.03	.03	.03
December	.03	.03	.03	.03
Year	.03	.03	.03	.03

Sulphur, Flour, Commercial

October 18, 1871, the price was $3.25 per 100 pounds; 1881, $2.80; 1891, $3.10; 1901, $1.70; 1911, $2; 1913, $2; 1918, January, $3.75.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.55	$1.55	$1.55	$1.55
February	1.55	1.55	1.55	1.55
March	1.55	1.55	1.55	1.55
April	1.55	1.55	1.55	1.55
May	1.55	1.55	1.55	1.55
June	1.55	1.55	1.55	1.55
July	1.55	1.55	1.55	1.55
August	1.55	1.55	1.55	1.55
September	1.55	1.55	1.55	1.55
October	1.55	1.55	1.55	1.55
November	1.55	1.55	1.55	1.55
December	1.55	1.55	1.55	1.55
Year	1.55	1.55	1.55	1.55

Tin, Bichloride

In 1871 the price was 45c. per pound; October 18, 1881, 36½c.; 1891, 24⅜c.; 1901, 11⅞c.; 1911, 11½c.; 1913, 12⅝c.; 1918, April, 29c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.17¾	$0.16¼	$0.15½	$0.15½
February	.16¼	.15⅝	.15¾	.15½
March	.15⅝	.15½	.15⅝	.15¾
April	.16	.15⅝	.15⅝	.14½
June	.15¼	.14½	.14½	.14
May	.15½	.15½	.14¼	.14
July	.14¾	.14½	.15¼	.14½
August	.14¾	.14½	.15	.15
September	.15	.14½	.15	.14½
October	.15½	.15	.14½	.13½
November	.15¾	.15½	.13¾	.13¼
December	.16¼	.15½	.13¼	.13¼
Year	.17⅜	.14½	.15¾	.13¼

Tin, Oxide

January 28, 1901, the price was 47c. per pound; October 18, 1911, 43c.; 1913, 44c.; 1918, May, $1.10.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.62	$0.60	$0.56	$0.56
February	.60	.58	.56	.56
March	.57	.56	.53	.53
April	.56	.56	.53	.50
May	.56	.56	.50	.49
June	.56	.55	.49	.49
July	.53	.53	.49	.49
August	.53	.53	.50	.50
September	.53	.53	.50	.48
October	.54	.54	.48	.46
November	.54	.54	.44	.42
December	.56	.54	.42	.42
Year	.62	.53	.56	.42

Buyers Prefer

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Market Information

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Accurate

Zinc Carbonate

October 18, 1871, the price was 29c. per pound; 1881, 34c.; 1891, 27c.; 1901, 19c.; 1911, 7¼c.; 1913, 9c.; 1918, January, 20c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10	$0.10	$0.10½	$0.10½
February	.10	.10	.10½	.10½
March	.10	.10	.10½	.10½
April	.10	.10	.10½	.10½
May	.10	.10	.10½	.10½
June	.10	.10	.10½	.10½
July	.10	.10	.10½	.10½
August	.10	.10	.10½	.10½
September	.10	.10	.10½	.10½
October	.10½	.10	.10½	.10½
November	.10½	.10½	.10½	.10½
December	.10½	.10½	.10½	.10½
Year	.10½	.10	.10½	.10½

Zinc Chloride, Fused

October 18, 1871, the price was 10c. per pound; 1881, 10½c.; 1891, 8¾c.; 1901, 6½c.; 1911, 4½c.; 1913, 4½c.; 1917, May, 44c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05¼	$0.05¼	$0.05¼	$0.05¼
February	.05¼	.05¼	.05⅝	.05⅝
March	.05¼	.05¼	.05⅝	.05⅝
April	.05¼	.05¼	.05⅝	.05⅝
May	.05¼	.05¼	.05⅝	.05⅝
June	.05¼	.05¼	.05⅝	.05⅝
July	.05¼	.05¼	.05⅝	.05⅝
August	.05¼	.05¼	.05⅝	.05⅝
September	.05¼	.05¼	.05⅝	.05⅝
October	.05¼	.05¼	.05⅝	.05⅝
November	.05¼	.05¼	.05⅝	.05⅝
December	.05¼	.05¼	.05⅝	.05⅝
Year	.05¼	.05¼	.05⅝	.05¼

Acids: Record of Prices

Acetic, 28 Percent

October 18, 1871, the price was $1 per 100 pounds; 1881, $3.50; 1891, $1.50; 1901, $1.62; 1911, $1.60; 1913, $1.75; 1918, June, $12.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$3.37½	$3.37½	$3.88	$3.88
February	3.37½	3.37½	3.88	3.88
March	3.37½	3.37½	3.88	3.88
April	3.37½	3.37½	3.88	3.88
May	3.37½	3.37½	3.88	3.88
June	3.37½	3.37½	3.88	3.88
July	3.63	3.37½	3.88	3.88
August	3.63	3.63	3.88	3.88
September	3.63	3.63	3.88	3.88
October	3.88	3.88	3.88	3.88
November	3.88	3.88	3.88	3.88
December	3.88	3.88	3.88	3.88
Year	3.88	3.37½	3.88	3.88

Acetic, Glacial, 99 Percent

October 18, 1871, the price was $1.15 per 100 pounds; 1881, $8; 1891, $5.50; 1901, $4; 1911, $8.50; 1913, $8; 1918, May, $42.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$11.90	$11.90	$13.68	$13.68
February	11.90	11.90	13.68	13.68
March	11.90	11.90	13.68	13.68
April	11.90	11.90	13.68	13.68
May	11.90	11.90	13.68	13.68
June	11.90	11.90	13.68	13.68
July	12.79	11.90	13.68	13.68
August	12.79	12.79	13.68	13.68
September	12.79	12.79	13.68	13.68
October	12.79	12.79	13.68	13.68
November	13.68	13.68	13.68	13.68
December	13.68	13.68	13.68	13.68
Year	13.68	11.90	13.68	13.68

Battery

October 18, 1871, the price was $2.25 per 100 pounds; 1881, $1.22; 1891, 85c.; 1901, $1.20; 1911, $1; 1913, $1; 1918, September, $9.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.60	$1.60	$1.60	$1.60
February	1.60	1.60	1.60	1.60
March	1.60	1.60	1.60	1.60
April	1.60	1.60	1.60	1.60
May	1.60	1.60	1.60	1.60
June	1.60	1.60	1.60	1.60
July	1.60	1.60	1.60	1.60
August	1.60	1.60	1.60	1.60
September	1.60	1.60	1.60	1.60
October	1.60	1.60	1.60	1.60
November	1.60	1.60	1.60	1.60
December	1.60	1.60	1.60	1.60
Year	1.60	1.60	1.60	1.60

Boric, Crystals

October 18, 1871, the price was 75c. per pound; 1881, 15c.; 1891, 13½c.; 1901, 10¾c.; 1911, 7c.; 1913, 7c.; 1919, December, 14½c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.08	$0.06½	$0.05½
February	.08	.08	.05½	.05½
March	.08	.08	.05½	.05½
April	.08	.08	.05½	.05½
May	.08	.08	.05½	.05½
June	.08	.08	.05½	.05½
July	.06½	.06½	.05½	.05½
August	.06½	.06½	.05½	.05½
September	.06½	.06¼	.05½	.05½
October	.06½	.06½	.05½	.05½
November	.06½	.06½	.06¼	.06¼
December	.06½	.06½	.06¼	.06¼
Year	.08	.06½	.06½	.05½

Citric, Crystals

October 18, 1871, the price was 80c. per pound; 1881, 63c.; 1891, 42c.; 1901, 36c.; 1911, 38½c.; 1913, 55c.; 1918, December, $1.25.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.44½	$0.44½	$0.46	$0.46
February	.44½	.44½	.46	.46
March	.44½	.44½	.46	.46
April	.46	.44½	.46	.46
May	.46	.46	.46	.46
June	.46	.46	.46	.46
July	.46	.46	.46	.46
August	.46	.46	.46	.46
September	.46	.46	.46	.46
October	.46	.46	.46	.46
November	.46	.46	.46	.46
December	.46	.46	.46	.46
Year	.46	.44½	.46	.46

Formic

In 1911 the price was 11c.; October 18, 1913, 14c. to 14½c.; 1918, January, 36c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.11	$0.11	$0.11	$0.11
February	.11	.11	.11	.11
March	.11	.11	.11	.11
April	.11	.11	.11	.11
May	.11	.11	.11	.10½
June	.11	.11	.11	.10½
July	.11	.11	.10½	.10½
August	.11	.11	.10½	.10½
September	.11	.11	.10½	.10½
October	.11	.11	.10½	.10½
November	.11	.11	.10½	.10½
December	.11	.11	.10½	.10½
Year	.11	.11	.11	.10½

Muriatic, 22 Degrees

October 18, 1871, the price was $3 per 100 pounds; 1881, $1.80; 1891, $1.20; 1901, $1.50; 1911, $1.45; 1913, $1.45; 1916, June, $5.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.60	$1.60	$1.60	$1.60
February	1.60	1.60	1.60	1.60
March	1.60	1.60	1.60	1.60
April	1.60	1.60	1.60	1.60
May	1.60	1.60	1.60	1.60
June	1.60	1.60	1.60	1.60
July	1.60	1.60	1.60	1.60
August	1.60	1.60	1.60	1.60
September	1.60	1.60	1.60	1.60
October	1.60	1.60	1.60	1.60
November	1.60	1.60	1.60	1.60
December	1.60	1.60	1.60	1.60
Year	1.60	1.60	1.60	1.60

Nitric, 42 Degrees

October 18, 1871, the price was $13 per 100 pounds; 1881, $8.25; 1891, $4.25; 1901, $4.50; 1911, $4.80; 1913, $4.50; 1917, October, $10.70.

Per 100 pounds

	1928. H.	1928. L.	1929. H.	1929. L.
January	$6.50	$6.50	$6.50	$6.50
February	6.50	6.50	6.50	6.50
March	6.50	6.50	6.50	6.50
April	6.50	6.50	6.50	6.50
May	6.50	6.50	6.50	6.50
June	6.50	6.50	6.50	6.50
July	6.50	6.50	6.50	6.50
August	6.50	6.50	6.50	6.50
September	6.50	6.50	6.50	6.50
October	6.50	6.50	6.50	6.50
November	6.50	6.50	6.50	6.50
December	6.50	6.50	6.50	6.50
Year	6.50	6.50	6.50	6.50

Oleum, 20 Percent

October 18, 1871, the price was $25 per ton; 1881, $15; 1891, $22; 1901, $36; 1911, $22; 1913, $25; 1918, November, $29.50.

Per ton

	1928. H.	1928. L.	1929. H.	1929. L.
January	$18.50	$18.50	$18.50	$18.50
February	18.50	18.50	18.50	18.50
March	18.50	18.50	18.50	18.50
April	18.50	18.50	18.50	18.50
May	18.50	18.50	18.50	18.50
June	18.50	18.50	18.50	18.50
July	18.50	18.50	18.50	18.50
August	18.50	18.50	18.50	18.50
September	18.50	18.50	18.50	18.50
October	18.50	18.50	18.50	18.50
November	18.50	18.50	18.50	18.50
December	18.50	18.50	18.50	18.50
Year	18.50	18.50	18.50	18.50

Oxalic

October 18, 1871, the price was 25c. per pound; 1881, 9¾c.; 1891, 6⅞c.; 1901, 5c.; 1911, 7½c.; 1913, 7½c.; 1916, March, 80c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.11	$0.11	$0.11	$0.11
February	.11	.11	.11	.11
March	.11	.11	.11	.11
April	.11	.11	.11	.11
May	.11	.11	.11	.11
June	.11	.11	.11	.11
July	.11	.11	.11	.11
August	.11	.11	.11	.11
September	.11	.11	.11	.11
October	.11	.11	.11¼	.11
November	.11	.11	.11¼	.11¼
December	.11	.11	.11¼	.11¼
Year	.11	.11	.11¼	.11

Phosphoric, 50 Percent, Technical

(In carboys)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08½	$0.08½	$0.08½	$0.08½
February	.08½	.08½	.08½	.08½
March	.08½	.08½	.08½	.08½
April	.08½	.08½	.08½	.08½
May	.08½	.08½	.08½	.08½
June	.08½	.08½	.08½	.08½
July	.08½	.08½	.08½	.08½
August	.08½	.08½	.08½	.08½
September	.08½	.08½	.08½	.08½
October	.08½	.08½	.08½	.08½
November	.08½	.08½	.08½	.08½
December	.08½	.08½	.08½	.08½
Year	.08½	.08½	.08½	.08½

Sulphuric, 60 Degrees

(In tanks)

Per ton

	1928. H.	1928. L.	1929. H.	1929. L.
January	$11.00	$11.00	$11.00	$11.00
February	11.00	11.00	11.00	11.00
March	11.00	11.00	11.00	11.00
April	11.00	11.00	11.00	11.00
May	11.00	11.00	11.00	11.00
June	11.00	11.00	11.00	11.00
July	11.00	11.00	11.00	11.00
August	11.00	11.00	11.00	11.00
September	11.00	11.00	11.00	11.00
October	11.00	11.00	11.00	11.00
November	11.00	11.00	11.00	11.00
December	11.00	11.00	11.00	11.00
Year	11.00	11.00	11.00	11.00

Tartaric, Crystals

October 18, 1871, the price was 50c. per pound; 1881, 42c.; 1891, 33c.; 1901, 28c.; 1911, 30¼c.; 1913, 31¼c.; 1919, April, 83c.

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.36	$0.35	$0.38½	$0.38½
February	.35	.35	.38½	.38½
March	.37	.36	.38½	.38½
April	.38	.37	.38½	.38½
May	.38	.38	.38½	.38½
June	.38	.38	.38½	.38½
July	.38	.38	.38½	.38½
August	.38	.38	.38½	.38½
September	.38	.38	.38½	.38½
October	.38½	.38	.38½	.38½
November	.38½	.38½	.38½	.38½
December	.38½	.38½	.38½	.38½
Year	.38½	.35	.38½	.38½

Chromite Output Increases

With the development of chromium plating, the production of chromite, the chief chrome ore, has grown rapidly in the past two years. The United States is not a large producer, but the output in this country is increasing. In 1928, shipments from mines totaled 660 tons. Imports, however, fell off from 222,360 tons in 1927 to 216,592 tons in 1928. World production increased from 408,000 tons in 1927 to 449,000 tons in 1928. The world reserves of chromite are estimated to be about 5,000,000,000 tons. At the present time Southern Rhodesia furnishes the greater part of the chromite imported into the United States. The ore from New Caledonia is best fitted for the production of chemicals and pigments.

Coaltar Products: Market Review

Despite the tremendous operations in progress in the iron and steel industry in all but the last few weeks of the year 1929, and the comparatively free supplies of coaltar basic-crudes resulting therefrom, the general position of the entire group was one of complete stability throughout the year. It will be recalled that ever since the advent of the great World War many of the vast industries utilizing dyes, particularly the cotton and wollen industries, hosiery, rug, tapestry and varnish had been dependent to an increasing extent on American dyes for the salability of their products. Moreover back in 1919 upwards of $84,111,000 worth of dyes and other finished products were turned out, and the value of all coaltar products was $133,500,000. Last year, however, the output of by-products including gas from coke oven operations was believed to have exceeded some $160,000,000, while crude and refined benzol in the amount of about 25,000,000 gallons were sold, and production of motor benzol was estimated around 110,000,000 gallons; toluol about 17,000,000 gallons, solvent naphtha 6,000,000 gallons; crude and refined napthalene about 13,000,000 pounds and creosote oil in the amount of about 13,000,000 gallons. Besides the production of dyes last year was estimated to have exceeded 100,000,000 pounds with a value of close to $42,000,000.

One of the outstanding features of the market last year was the sharp recovery in the volume of overseas shipments of motor benzol. In 1928, it will be recalled, the exports of motor benzol had declined to some 21,338,000 gallons. There was a pronounced recovery in foreign trade during 1929, however, as total exports in the first eleven months of the year included some 31,631,742 gallons benzol compared with but 19,955,150 gallons in the corresponding period of the previous year, 98,669 gallons of crude coaltar, against 130,579 gallons in the same time in the year before, 17,882,883 pounds crude distillates against 14,933,445 pounds in 1928, while exports of coaltar intermediates were 2,524,680 pounds against 2,631,868 pounds in the year before. American manufacturers and exporters of coaltar colors, dyes and stains continued to meet competition in foreign markets last year, but they were successful in disposing of some 278,894 pounds of dyes for household use against 243,320 pounds in the year before, while the exports of other colors, dyes and stains amounted to about 33,000,000 pounds in contrast with 25,600,000 pounds in the corresponding period of the previous year. China alone bought about $1,500,000 worth of synthetic indigo last year.

Prices Were Steady

The first quarter of the year started out with generally favorable prospects facing the industry. Conditions on the whole were such as to inspire confidence that the twelve-month would be quite a satisfactory one, although close selling between producers sometimes led to comments that the producers were selling on too narrow a margin of profit. Production, sales, collections and the general outlook for business in coaltar products during the first quarter was generally better than in the corresponding preceding quarter. The second quarter of the year was not quite as lively a period as had been looked for as hand-to-mouth buying provoked by tariff uncertainties did much to produce unsettlement. General condition of the coaltar products appeared to be good, however, for production and sales were running at about 107 percent of the totals of the corresponding preceding period. The sales of coaltar crudes, intermediates, and coaltar colors were in all instances in excess of the totals of the corresponding preceding period and the general condition of business in these products was in all instances better than it had been in the year before. Business had slowed up somewhat at the end of the third period which was natural enough in view of the normal let down in activity incident to the summer months. The increasing use of synthetic products at this time had the resulting tendency to lower prices. The tariff uncertainty, however, continued to hang over the market. It was noteworthy, though, that all branches of the coaltar products industry could point to fully as large a production during the third quarter as in the year before. The sales of coaltar colors were generally conceded to have shown an increase over the preceding period. The tendency towards over-production which had been shown in previous years had been pretty well dissipated and the producers generally were more emphatically stressing the necessity for more remunerative profits and perhaps more of a restriction on the volume of production.

The above condition seemed to be well borne out in the index numbers compiled from twenty typical coaltar products on the basis of a normal of 100 for August 1, 1914, which was quite stable and without variation at the commencement of each of the four quarters of the year as well as on December 31, viz.:—

Jan. 1	March 1	June 1	Sept. 1	Dec. 31
127.9	127.9	127.9	127.9	127.9

The strong conditions which ruled in the general market for coaltar products at the start of 1929 were caused it will be recalled through the fact that producers had been so successful in arranging for such substantial forward sales, of the principal crudes and developed products. The preceding year had been one of epochal production and sales in the iron and steel industry, mills having started the year with operations at close to 85 percent of ingot capacity with great pressure on the furnaces to catch up with the extensive orders which had been booked during October, November and December of 1928. At the same time the producers had disposed of their output of motor benzol for a lengthy period ahead and early evidences were had at this time that they would encounter no difficulty at all in disposing of their output. In connection with the extensive rate of operations in the iron and steel industry it was significant that while the producers of benzol had some opportunity early in the year to build up their reserves in preparation for another big year, the tremendous increase in by-product coke production was giving no small amount of concern.

Pig Iron Output Increases

The actual production of by-product coke for the first ten months of the year had in fact increased some 13.1 percent to 44,974,000 short tons in comparison with 39,755,000 short tons in the corresponding period of the preceding year. At the same time production in Canada had increased some 18.7 percent to 1,995,000 short tons, against 1,680,000 short tons in the corresponding perceding period. Statistics on pig iron production for the first ten months of the year likewise showed a similarly healthy state of affairs, an increase of some 16.4 percent to 36,267,000 long tons, in comparison with 31,166,000 long tons in the preceding corresponding period having taken place. Merchant furnaces turned out 17.6 percent more iron in the last ten months of last year than in the year before, the total having been 7,356,000 long tons. Canadian pig iron production increased some 9.8 percent in the same time and stood at 921,000 long tons. There were 197 furnaces in blast at the end of October, an increase of 3 percent over a year ago, and their capacity was 108,800 long tons per day, an increase of 4.4 percent.

Whereas in 1923 only some 27.5 percent of the total coke production was by-product coke at the start of 1929 all but 15 percent of the American made coke was by-product coke and towards the close of the year close to 90 percent of all the coke produced, was by-product coke. Early last year industrial operations in Europe were interfered with by the coldest weather in a period of over 200 years. This materially handicapped foreign producers and created an overseas demand of substantial proportions. In March operations in the iron and steel industry had gotten up to 90 to 95 percent of ingot capacity and a month later the biggest producers had stepped up their operations to 97 to 98 percent of ingot capacity. Not until October was there any indication that production of iron and steel was about to decline. At this time the reduced requirements of the automotive industry finally did produce a recession, although this could hardly be said to have had any influence on the production of benzol or other hydrocarbons as the output of coke had not declined in proportion to that in steel.

Steel Operations at Record

In spite of its lame ending, 1929 was really marked by an altogether unusual gain in steel production, total ingot output being between 54,500,000 to 55,000,000 tons, which was an increase of about 9 percent over the preceding year. If the poor showing at the end of the year is thrown out, a correct indication of the pace of the market was had through the fact that during the twelve month period of maximum operation from October, 1928, to September, 1929, inclusive, ingot production reached some 56,750,000 tons, a gain of 21 percent over 1926. The part the automobile played in steel making may well be judged by the fact that in 1929 not less than 20 percent of all the steel made went into automobile production, whereas, in the preceding year, it accounted for perhaps 18 percent. While the steel industry curtailed its production more during November than in any one previous month in its history, production both in this country and for the world reached new high records last year. The steel production of 21 countries for example was 117,850,000 gross tons, a 9 percent increase over the 108,220,000 tons of 1928, while the world's pig iron output at some 96,180,000 tons was 10.6 percent greater than the 1928 total of 86,960,000 tons.

Prospects for tariff revision continued to unsettle the trade even during the early Spring months of the year, although but a relatively few changes were proposed. The schedules for coaltar dyes were to be continued at the same rates, the American selling prices serving as the basis for ad valorem rates. In its report made early in May the sub-committee in charge of schedule I pointed out that since the close of the war under the protection afforded by the act of 19.2 the coaltar industry had continued to expand so that today it represents an investment of about $100,000,000 and employs 10,000 men. Development of fast dyes having brightness, fastness to sun, laundering, ironing, had been brought about by the devotion of a vast amount of money and time to the problems involved, increased production by improved methods of the important intermediate anthraquinone having greatly facilitated the development of fast dyes. Other important developments included the production of phthalic anhydride by cheaper methods, the production of synthetic phenol from benzene, the development of insecticides and fungicides by which increased yields and improvement of such crops as wheat, corn, potatoes and other farm products was obtained. Production of new chemicals for the rubber industry was also of great interest co-incident with the development of anti-oxidants of accelerators for vulcanization and of compounds for improving the aging of rubber, the life of many rubber products having been extended from 100 to 500 percent.

Close watch was being kept during the year on products like cresol, cresylic acid and creosote oil because of what might happen to them under any changes which might take place under the tariff bill. It was pointed out, however, that their status under the Hawley-Smoot tariff bill before the Congress was exactly the same as under the tariff now in force. There had been periodical promises of large production of these products on the part of domestic manufacturers, but larger quantities of cresylic acid and cresol than ever were being imported to supplement domestic supplies because of the constantly expanding demands. During the late Fall months debate was held in the Senate over the wood tar and pitch schedules of the bill. The Senate had rejected the Finance Committee's amendment to return wood tar and pitch to the free list, the house having made these dutiable at 1c. per pound, which rate the Senate had retained.

Coaltar colors presented as interesting a division of the general market for coaltar products as any other. Our independence of the German dye cartel was almost complete as dyes were being sold in this market at prices lower than the German in the Far East, and even in Germany. Marketing difficulties in Germany served to drive prices of coaltar products in that market downward. There were rather liberal tar supplies from the Ruhr district and production by the German dye trust was increased. However, it was the increased production of atmospheric nitrogen rather than any other reason which enabled the German Dye Trust to make so satisfactory a financial showing last year.

I. G. Enters American Field

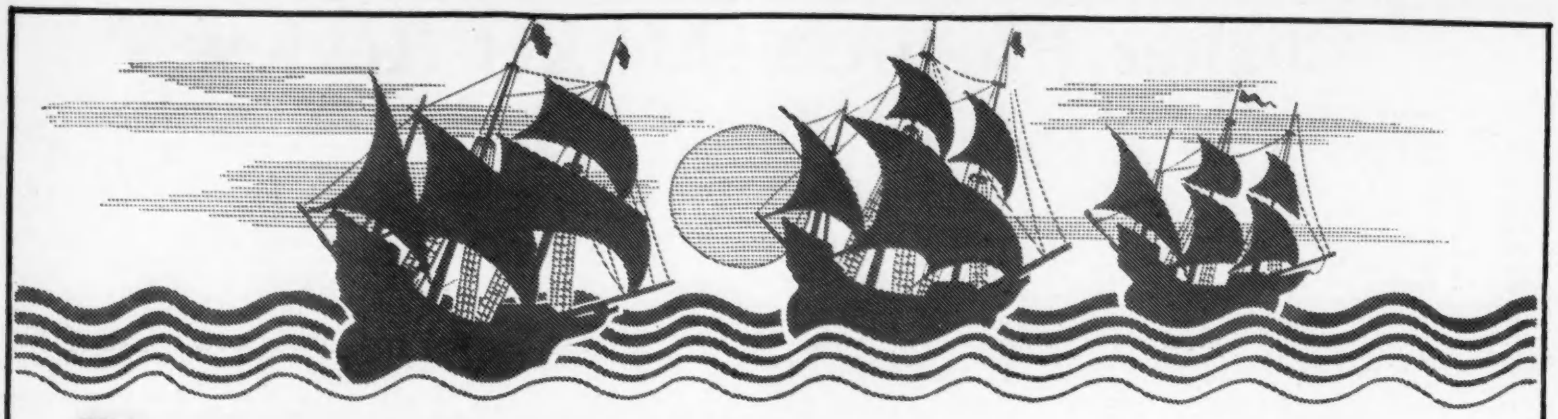
Early in the Spring there was formed here the American I. G. Chemical Corporation, marking the official entrance of the powerful German chemical cartel into direct competition with the American chemical industry. It was ushered in under the auspices of the National City Bank with assets of over $60,000,000 and a directorate which included some of the most prominent financiers and industrialists in America. The company, it was expected, would enter a very diversified field with all the patents and processes of the I. G. at its command. It was expected to actively engage in the development and distribution in this country of a wide variety of products including dyestuffs, pharmaceuticals, fungicides, organic and inorganic chemicals, solvents, lacquer materials, films, artificial silks, synthetic nitrogen fertilizer and fertilizer products. Negotiations for the erection of a synthetic nitrogen plant were started but had not been consummated. Late in the Fall months directors of the German dye trust reached a working agreement with the Standard Oil Co. of New Jersey for the utilization of the trust's coal and oil hydrogenation patents. These will be exploited throughout the world excepting in Germany by a jointly owned company under the management of the Standard Oil Company of New Jersey. A special arrangement which is to safeguard the dye trust's interests covered the German market for benzene manufactured by the trust. Under the terms agreed to there will be a marketing outlet for the production of synthetic gasoline by the I. G. in Germany. Following this agreement, the Standard Oil Company of New Jersey increased its plant facilities both at Bayonne, N. J., and at Baton Rouge, La. It was believed that the agreement would go far towards making for a more orderly, economically sound, and much greater expansion of the world's petroleum industry.

Prior to its entrance into the American chemical field the German I. G. had entered an agreement with French producers to include the big Swiss interests in their organization. One reason for this amalgamation, it was believed, was to combat the increasing activity of the American and British dye interests in the Far East. It was the understanding that Germany would attempt to monopolize those markets,, the French the South American trade, while the Swiss would seek the south European business. The Swiss had been co-operating with the Germans and French under a gentleman's agreement since the fall of 1928. This arrangement was said to have worked satisfactorily and to have resulted in an agreement of most stable form, which was arranged the end of April. In practice the Germans were getting 75 percent of the distribution, the French 17 percent and the Swiss 8 percent. The principal objects of the new accord were understood to be to fix prices and maintain common sales bureaus throughout the world, and to provide production, marketing and technical co-operation. The technical co-operation envisaged was believed to include the communication of the German dye secrets to the French and Swiss, but there was said to be no arrangement in regard to pooling of profits. The dyes affected were aniline and synthetic, including synthetic indigo. The Swiss companies involved were the Aktien Gesellschaft fuer Chemische Industries Ciba, the Sandoz firm (connected with Ciba), and the Geigy Company.

The new accord, it was believed, would signalize a price convention and economy measures, particularly in the matter of the consolidation of sales agencies abroad. It did not go so far as to fix production and export allocations on a definite percentage, but eventually the dye cartel was expected would be placed on the same basis as the European steel cartel, which has a strict method of regulating sales and exports. While the ramifications of the European dye cartel were admittedly intricate, it was held that its aims were basically sound. It was realized, for example, that centralized control, amalgamation of interests and reduction of overhead had benefited producer and consumer alike and that where research developed new economies consumers were given the benefits of the lower costs. There was virtually no legislation in Europe to hamper the development of the cartel idea.

Rayon Industry Big Buyer of Dyes

The increasing requisitions of the rayon industry on the dye market was one of the interesting developments last year. The rayon industry had made remarkable strides, production having increased from about 15,000,000 pounds in 1921 to over 100,000,000 pounds in 1929. The production here had shown an increase of about 25 percent, while importations were fully 50 percent ahead of the totals of the preceding year. Close to 50 percent of the rayon was being utilized in the knit goods industries, but more than 20 percent was utilized by cotton goods manufacturers and about 15 percent by the silk goods industry in the manufacture of all rayon fabrics or as mixtures. One development in connection with rayon fabrics during the year was the first reduction in the price of viscose and nitro-cellulose rayon yarns in two years. The price levels which were fixed in March, 1927, remained firm until February 21, 1929, when the price for 150 denier first quality was cut from $1.50 to $1.40 a pound, with changes in practically every number from 75 denier to the heaviest. The prices which underwent the greatest changes were the more competitive numbers. One other result of the change was in the modification of the former methods of grading yarns, using the designations of first and second quality instead of the former categories, "A," "B" and "C" grades. It was generally asserted here that the depressed condition of the European rayon market forced the changes, since foreign producers compelled to move their yarns invoiced them so that they could be landed in the United States and sold at figures considerably below those quoted by the domestic producers. Although the development of the industry responsible for the manufacture



DISCOVERING NEW MARKETS

CORRECTING "SPOTTY" SALES— FLATTENING OUT SEASONAL CURVES

OIL, PAINT AND DRUG REPORTER
Where You Can Sell
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of chemical fibers — rapidly becoming known only as the rayon industry—was remarkable, the production exceeding that of natural silk, it yet supplied the equivalent only of approximately 3 percent of the total quantity of textile fibers used. Its growth, however, continues apace, as new novelty fabrics are appearing almost every few weeks, and rayon is being used in conjunction with and in place of natural fibers in many classes of fabrics.

Naturally the dyeing of these products was an intricate process, requiring close study. The nature of rayon suggested experiments in the loading of cellulose acetate or cellulose ether by means of a series of alkaline stannates or zincates. Resistance of the fiber to hydraulic agents was thus increased. The tin weighting of rayon and silk dyes engaged the attention of the trade to no small extent. In fact, attempts were made to limit the amount of tin weighting in these textiles. It was pointed out that the costs of dyeing silk and rayon with pure dye was from 5 cents to 6 cents per yard, whereas the cost of tin weighting averaged from 17 cents to 18 cents per yard. One of the results of the agitation against overweighting of silk was the adoption of a pure dye goods by manufacturers of dresses ranging from $22.50 up at wholesale, while another was the swinging of well-known silk manufacturers from weighted to pure dye goods.

Phenol Soars on Bakelite Demand

Of especial significance as regards the position of basic crudes was the strong position recorded in the market for phenol. The product started the year at 13¾ cents per pound in 250-pound drums, car lots, works. There was a period of unsettlement during May and June, when supplies could have been bought at as low as 12¾ cents per pound, but an acute shortage started to develop during June, when it turned out that producers had sold their output through the summer months. During June car lot sales of the product were arranged at as high as 16 cents per pound, and in less than car-lot quantities up to 20 cents per pound was quoted. Large quantities were being taken by the bakelite manufacturers for the production of phenylithic resins. The producers had their output sold for many months ahead early in July, and at this time one producer specializing in the natural product raised his price to 14½ cents per pound, car lots, drums. It developed then that producers were increasing plant facilities to overcome the large increase in demand from the bakelite manufacturers. It was recalled that in the course of the preceding influenza epidemic considerable quantities of phenol had been taken out of the market and converted into salicylates. At around this time the producers took definite action and placed an advance of 1½ cents per pound into effect, quoting the synthetic product on the basis of 14¾ cents per pound, car lots, works, drums. In the meanwhile bakelite for commercial purposes had become so popular that a demand had been created for all the phenol which could be produced promptly. Even late in the fall it was quite the usual thing for premiums to be paid for prompt shipment goods and as high as 22 cents to 24 cents per pound was quite frequently mentioned as the sales price.

Benzene Outlet Was Bigger

A year of exceptional activity was generally experienced by the marketers of benzene. In October of the preceding year the price had been raised to 23c. per gallon in tanks and these prices were almost uniformly maintained until October when the outlet proved inadequate to take care of all of the production which had piled up by reason of the actively maintained rate of operations in the country's iron and steel mills. During November, the producers were campaigning around for the renewal of contracts for 1930 and were successful in interesting most members of the trade.

Late in November offers came out at as low as 20c. per gallon for the 90 percent as well as the pure and the nitration grades, demand at this time being virtually at the season's low point. Co-incident with the rapid fall in the rate of iron and steel operations at this time it was believed the output of benzene had sympathetically declined. However, much of the output of benzene was being diverted to motor benzol uses so that a considerable portion of the supplies were being taken out of the market in this manner. The market continued as a comparatively quiet affair in the closing days of the year, but no actual break in producers' views occurred until the first week of the new year when a general reduction of 1c. per pound, establishing the 90 percent and the pure grades on the basis of 22c. per gallon tanks, works and the nitration grade at 25c. per gallon, tanks works, was named.

Lacquer Makers Buy Toluene

A further pronounced expansion in the lacquer materials field during 1929 made for generally satisfactory marketing conditions in toluene. It will be recalled that producers were in the position in the Fall of 1928, where a substantial jacking up of production was necessary to care for all trade requirements. They instituted at that time a 5c. per gallon advance in the product which established the market at 40c. per gallon, tanks, works, and 45c. per gallon, drums, works. These prices held throughout 1929 under an enormously increased demand. Petroleum substitutes cut into the legitimate field of toluene at times, but there was never a question of any price shading until the last few weeks of the year, when the call for lacquers from the automotive industry had about run its course and when other industrial users were beginning to curtail their purchases. It was noteworthy at the end of the year that some of the lower priced hydrocarbons such as solvent naphtha and xylene were cutting into the toluene market, as the latter were being widely utilized as substitute materials because of their lower price. Although the output had declined in the course of the contraction in activities of the iron and steel industries, the fact remained that marketers were anxious to stimulate larger sales and in the first week of 1930 they cut prices 5c. per gallon and re-established the price levels which had ruled during the greater part of 1928. This action was satisfactory from the standpoint of the automobile body builders, who had long been pressing for lower raw materials in order that they could pass the benefits along to the ultimate consumer.

Most of the coaltar crudes utilized for disinfecting and wood preserving purposes maintained a decidedly steady position throughout the 1929. Prospects of tariff revision had an unsettling influence on creosote oil for a while, but the range of 13c. to 14c. per gallon for grades 2 and 3 and 15c. to 16c. per gallon for grade 1 was fairly well maintained throughout the year. In the case of pale grades of cresylic acid some rather large quantities were being taken to supplement phenol supplies. Throughout the year the price remained at 65c. per gallon, drums, however. There had been promises of an increased domestic production, but as much dependence as in previous years was given to supplies from foreign sources.

Crude Naphthalene Scarce

The season for refined naphthalene started quite early in the year. Substantial importations of foreign crude were arriving during the first quarter to supplement domestic supplies. As early as January reports were circulating that additional offerings of foreign crude were only to be had for the last half of 1929 delivery. This had a strengthening influence on the refined product, which continued to meet widespread demand from early in March until almost Labor Day. Throughout the season foreign crudes were wanted and were still in rather limited supply at the end of the year.

Intermediates Finish Irregular

As a result of the underlying stability of nearly all coaltar intermediates for the greater part of 1929 dye manufacturers were able to gauge their costs to a nicety. Fluctuations in the intermediates and acids were comparatively few in number and for the most part irregular. In early February orthocresol declined 1c. per pound to 17c. to 18c. per pound as the import cost had risen to 11½c. per pound c.i.f. to which must be added a duty of 40 percent plus 7 percent on the foreign valuation. Technical resorcinol had a 10c. decline in March which established it at $1.15 per pound on contract and $1.25 per pound for prompt shipment. During May producers announced declines of 5c. in a betanaphthylamine to 60c. to 65c. per pound; 2c. in diphenylamine to 40c. per pound, 5c. in G. salt to 45c. to 50c. per pound, 2c. in metanitroanilin to 70c. to 72c. per pound in kegs, 17c. in gamma acid to 80c. to 85c. per pound and 1c. in paraminophenol to 99c. to $1 per pound. The month of July opened with inventories in progress in numerous quarters of the trade. Producers at this time strived to stimulate the buying movement further and declines of 6c. per pound took place in technical acid benzoic to 51c. to 53c. per pound in barrels, while dimethylanilin was lowered 1c. to 26c. to 28c. per pound, metaphenylaminediamine 4c. to 80c. to 84c. per pound, and paranitrophenol 5c. to 45c. to 47c. per pound. The balance of the Summer months were devoid of any further price fluctuations, but with the commencement of September the producers depressed H. acid 3c. to 65c. to 70c. per pound, while raising paranitrotoluene 1c. to 28c. to 30c. per pound. Metanitroanilin was also lowered 3c. to 67c. to 69c. per pound. In early October metatoluylenediamine was cut 3c. to a basis of 67c. to 69c. per pound in kegs. No worthwhile change appeared then until November, when a cut of 10c. came out in acid monosulphonic, which established it at $1.55 to $1.60 per pound. In the closing days of December dianisidin was reduced 35c. and priced at $2.35 to $2.45 per pound, dinitrobenzene ½c. to 15½c. to 16c. per pound, and thiocarbanilide 4c. to 22½c. to 23c. per pound. The final price changes of the year also appeared at this time when paraphenylenediamine was advanced 15c. to $1.35 to $1.40 per pound, while para-aminophenol base was raised 26c. to $1.25 per pound, and the hydrochloride 15c. to $1.40 per pound.

Coaltar Products: Record of Prices

Basic Products

Benzene (Benzol), 90 Percent

In March, 1916, the price was 90c. per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.21	$0.21	$0.23	$0.23
February	.21	.21	.23	.23
March	.22	.21	.23	.23
April	.22	.22	.23	.23
May	.22	.22	.23	.23
June	.22	.22	.23	.23
July	.22	.22	.23	.23
August	.22	.22	.23	.23
September	.22	.22	.23	.23
October	.23	.22	.23	.23
November	.23	.23	.23	.20
December	.23	.23	.21	.20
Year	.23	.21	.23	.20

Cresol, U.S.P.

In January, 1917, the price was $1.50 per pound.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.17½	$0.17½	$0.14	$0.14
February	.17½	.17½	.14	.14
March	.17½	.17½	.14	.14
April	.14	.14	.14	.14
May	.14	.14	.14	.14
June	.14	.14	.14	.14
July	.14	.14	.14	.14
August	.14	.14	.14	.14
September	.14	.14	.14	.14
October	.14	.14	.14	.14
November	.14	.14	.14	.14
December	.14	.14	.14	.14
Year	.17½	.14	.14	.14

Naphtha, Solvent

In January, 1917, the price was 30c. per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.35	$0.35	$0.30	$0.30
February	.35	.35	.30	.30
March	.35	.30	.30	.30
April	.30	.30	.30	.30
May	.30	.30	.30	.30
June	.30	.30	.30	.30
July	.30	.30	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	.30	.30
November	.30	.30	.30	.30
December	.30	.30	.30	.30
Year	.35	.30	.30	.30

Naphthalene, Flake

In 1901 the price was 2¾c. per pound; October 18, 1911, 2½c.; 1913, 2¼c.; 1916, March, 16c. per pound.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05	$0.05	$0.05	$0.05
February	.05	.05	.05	.05
March	.05	.05	.05	.05
April	.05	.05	.05	.05
May	.05	.05	.04½	.04½
June	.05	.05	.04½	.04½
July	.05	.05	.04½	.04½
August	.05	.05	.04½	.04½
September	.05	.05	.04½	.04½
October	.05	.05	.04½	.04½
November	.05	.04½	.04½	.04½
December	.04½	.04½	.04½	.04½
Year	.05	.04½	.05	.04½

Phenol, U.S.P.

July 10, 1875, the price was 55c. per pound; October 18, 1881, 40c.; 1891, 12c.; 1901, 23c.; 1911, 15c.; 1913, 8½c.; 1918, February, 18c.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.17	$0.17	$0.13¼	$0.13¼
February	.17	.17	.13¼	.13¼
March	.17	.17	.13¼	.13¼
April	.17	.17	.13¼	.13¼
May	.17	.15	.12¾	.12¾
June	.15	.15	.12¾	.12¾
July	.15	.15	.14¾	.12¾
*August	.13¼	.12¾	.14¾	.14¾
September	.13¼	.13¼	.14¾	.14¾
October	.13¼	.13¼	.14¾	.14¾
November	.13¼	.13¼	.14¾	.14¾
December	.13¼	.13¼	.14¾	.14¾
Year	.17	.12¾	.14¾	.12¾

* Quotation was changed to f.o.b. works.

Tar Acid Oil, 25 Percent

In July, 1918, the price was 55c. per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.29	$0.29	$0.29	$0.29
February	.29	.29	.29	.29
March	.29	.29	.29	.29
April	.29	.29	.29	.29
May	.29	.29	.29	.29
June	.29	.29	.29	.29
July	.29	.29	.29	.29
August	.29	.29	.29	.29
September	.29	.29	.29	.29
October	.29	.29	.29	.29
November	.29	.29	.29	.29
December	.29	.29	.29	.29
Year	.29	.29	.29	.29

Toluene

In February, 1918, the price was $6 per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.35	$0.35	$0.40	$0.40
February	.35	.35	.40	.40
March	.35	.35	.40	.40
April	.35	.35	.40	.40
May	.35	.35	.40	.40
June	.35	.35	.40	.40
July	.35	.35	.40	.40
August	.35	.35	.40	.40
September	.35	.35	.40	.40
October	.40	.35	.40	.40
November	.40	.40	.40	.40
December	.40	.40	.40	.40
Year	.40	.35	.40	.40

Xylene, Nitration

In February, 1917, the price was $1.20 per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.55	$0.55	$0.50	$0.50
February	.55	.55	.50	.50
March	.55	.50	.50	.50
April	.50	.50	.50	.50
May	.50	.50	.50	.50
June	.50	.50	.50	.50
July	.50	.50	.50	.50
August	.50	.50	.50	.50
September	.50	.50	.50	.50
October	.50	.50	.50	.50
November	.50	.50	.50	.50
December	.50	.50	.50	.50
Year	.55	.50	.50	.50

Acids

Benzoic, Technical

October 18, 1871, the price was 30c. per ounce; 1881, 22c.; 1891, 8c.; 1901, 12½c.; 1911, 11¼c.; 1913, 23c. per pound; 1916, December, $9.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.57	$0.57	$0.57	$0.57
February	.57	.57	.57	.57
March	.57	.57	.57	.57
April	.57	.57	.57	.57
May	.57	.57	.57	.57
June	.57	.57	.57	.57
July	.57	.57	.57	.57
August	.57	.57	.51	.51
September	.57	.57	.51	.51
October	.57	.57	.51	.51
November	.57	.57	.51	.51
December	.57	.57	.51	.51
Year	.57	.57	.57	.51

Cresylic, Pale, 97 to 99 Percent

In August, 1918, the price was $1.25 per gallon.

	Per gallon 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.72	$0.72	$0.65	$0.65
February	.72	.72	.65	.65
March	.73	.73	.65	.65
April	.73	.73	.65	.65
May	.73	.73	.65	.65
June	.73	.73	.65	.65
July	.73	.73	.65	.65
August	.73	.73	.65	.65
September	.72	.72	.65	.65
October	.72	.72	.65	.65
November	.78	.72	.65	.62
December	.78	.65	.62	.62
Year	.78	.65	.65	.62

H

In August, 1918, the price was $3.40 per pound.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.68	$0.68	$0.68	$0.68
February	.68	.68	.68	.68
March	.68	.68	.68	.68
April	.68	.68	.68	.68
May	.68	.68	.68	.68
June	.68	.68	.68	.68
July	.68	.68	.68	.68
August	.68	.68	.68	.68
September	.68	.68	.68	.65
October	.68	.68	.65	.65
November	.68	.68	.65	.65
December	.68	.68	.65	.65
Year	.68	.68	.68	.65

Picric

In August, 1881, the price was 45c. per pound; 1891, 52½c.; 1901, 40c.; 1911, 55c.; 1913, 50c.; 1916, May, $1.50.

	Per pound 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.40	$0.40	$0.30	$0.30
February	.40	.40	.30	.30
March	.40	.40	.30	.30
April	.40	.40	.30	.30
May	.40	.40	.30	.30
June	.40	.40	.30	.30
July	.30	.30	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	.30	.30
November	.30	.30	.30	.30
December	.30	.30	.30	.30
Year	.40	.30	.30	.30

Salicylic, Technical

On August 1, 1881, the price was $1.40 per pound; 1891, $1.12; 1901, 39½c.; 1911, 32c.; 1913, 25c.; 1916, April, $4.25.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.37	$0.37	$0.37	$0.37
February	.37	.37	.37	.37
March	.37	.37	.37	.37
April	.37	.37	.37	.37
May	.37	.37	.37	.37
June	.37	.37	.37	.37
July	.37	.37	.37	.37
August	.37	.37	.33	.33
September	.37	.37	.33	.33
October	.37	.37	.33	.33
November	.37	.37	.33	.33
December	.37	.37	.33	.33
Year	.37	.37	.37	.33

Intermediates

Alphanaphthol, Technical

In December, 1917, the price was $1.25 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.60	$0.60	$0.60	$0.60
February	.60	.60	.60	.60
March	.60	.60	.60	.60
April	.60	.60	.60	.60
May	.60	.60	.60	.60
June	.60	.60	.60	.60
July	.60	.60	.60	.60
August	.60	.60	.60	.60
September	.60	.60	.60	.60
October	.60	.60	.60	.60
November	.60	.60	.60	.60
December	.60	.60	.60	.60
Year	.60	.60	.60	.60

Alphanaphthylamine

In January, 1917, the price was $1.35 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.32	$0.32	$0.32	$0.32
February	.32	.32	.32	.32
March	.32	.32	.32	.32
April	.32	.32	.32	.32
May	.32	.32	.32	.32
June	.32	.32	.32	.32
July	.32	.32	.32	.32
August	.32	.32	.32	.32
September	.32	.32	.32	.32
October	.32	.32	.32	.32
November	.32	.32	.32	.32
December	.32	.32	.32	.32
Year	.32	.32	.32	.32

Anilin Oil (*Drums*)

August 16, 1881, the price was 26c. per pound; October 18, 1891, 25c.; 1901, 9c.; 1911, 10¾c.; 1913, 10½c.; 1916, December, 95c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.15	$0.15	$0.15	$0.15
February	.15	.15	.15	.15
March	.15	.15	.15	.15
April	.15	.15	.15	.15
May	.15	.15	.14½	.14½
June	.15	.15	.14½	.14½
July	.15	.15	.14½	.14½
August	.15	.15	.14½	.14½
September	.15	.15	.14½	.14½
October	.15	.15	.14½	.14½
November	.15	.15	.14½	.14½
December	.15	.15	.14½	.14½
Year	.15	.15	.15	.14½

Anilin Salt

August 16, 1881, the price was 36c. per pound; October 18, 1891, 21c.; 1901, 8¼c.; 1911, 9½c.; 1913, 8⅝c.; 1916, December, $1.35.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.24	$0.24	$0.24	$0.24
February	.24	.24	.24	.24
March	.24	.24	.24	.24
April	.24	.24	.24	.24
May	.24	.24	.24	.24
June	.24	.24	.24	.24
July	.24	.24	.24	.24
August	.24	.24	.24	.24
September	.24	.24	.24	.24
October	.24	.24	.24	.24
November	.24	.24	.24	.24
December	.24	.24	.24	.24
Year	.24	.24	.24	.24

Benzaldehyde, Technical

In April, 1918, the price was $5.50 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.65	$0.65	$0.60	$0.60
February	.60	.60	.60	.60
March	.60	.60	.60	.60
April	.60	.60	.60	.60
May	.60	.60	.60	.60
June	.60	.60	.60	.60
July	.60	.60	.60	.60
August	.60	.60	.60	.60
September	.60	.60	.60	.60
October	.60	.60	.60	.60
November	.60	.60	.60	.60
December	.60	.60	.60	.60
Year	.65	.60	.60	.60

Benzidin Base

In March, 1917, the price was $2.10 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.70	$0.70	$0.67	$0.67
February	.70	.65	.67	.67
March	.67	.65	.67	.67
April	.67	.67	.67	.67
May	.67	.67	.67	.67
June	.67	.67	.67	.67
July	.67	.67	.67	.67
August	.67	.67	.67	.67
September	.67	.67	.67	.67
October	.67	.67	.67	.67
November	.67	.67	.67	.67
December	.67	.67	.67	.67
Year	.70	.65	.67	.67

Benzyl Chloride, 95 to 97 Percent

In May, 1918, the price was $2.70 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.30	$0.30	$0.30	$0.30
February	.30	.30	.30	.30
March	.30	.30	.30	.30
April	.30	.30	.30	.30
May	.30	.30	.30	.30
June	.30	.30	.30	.30
July	.30	.30	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	.30	.30
November	.30	.30	.30	.30
December	.30	.30	.30	.30
Year	.30	.30	.30	.30

Betanaphthol, Technical

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.22	$0.22	$0.22	$0.22
February	.22	.22	.22	.22
March	.22	.22	.22	.22
April	.22	.22	.22	.22
May	.22	.22	.22	.22
June	.22	.22	.22	.22
July	.22	.22	.22	.22
August	.22	.22	.22	.22
September	.22	.22	.22	.22
October	.22	.22	.22	.22
November	.22	.22	.22	.22
December	.22	.22	.22	.22
Year	.22	.22	.22	.22

Betanaphthylamine, Technical

In January, 1918, the price was $2 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.65	$0.65	$0.65	$0.65
February	.65	.65	.65	.65
March	.65	.65	.65	.65
April	.65	.65	.65	.65
May	.65	.65	.60	.60
June	.65	.65	.60	.60
July	.65	.65	.60	.60
August	.65	.65	.60	.60
September	.65	.65	.60	.60
October	.65	.65	.60	.60
November	.65	.65	.60	.60
December	.65	.65	.60	.60
Year	.65	.65	.65	.60

Diethylanilin

In May, 1918, the price was $5.50 per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.55	$0.55	$0.55	$0.55
February	.55	.55	.55	.55
March	.55	.55	.55	.55
April	.55	.55	.55	.55
May	.55	.55	.60	.55
June	.55	.55	.60	.60
July	.55	.55	.60	.60
August	.55	.55	.60	.60
September	.55	.55	.60	.60
October	.55	.55	.60	.60
November	.55	.55	.60	.60
December	.55	.55	.60	.60
Year	.55	.55	.60	.55

Dimethylanilin

In May, 1920, the price was $1.65 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.31	$0.31	$0.27	$0.27
February	.31	.31	.27	.27
March	.31	.31	.27	.27
April	.30	.30	.27	.27
May	.30	.30	.27	.27
June	.30	.30	.27	.27
July	.30	.30	.27	.23
August	.30	.27	.26	.26
September	.27	.27	.26	.26
October	.27	.27	.26	.26
November	.27	.27	.26	.26
December	.27	.27	.26	.26
Year	.31	.27	.27	.26

Dinitrobenzene

In September, 1917, the price was 50c. per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.15	$0.13	$0.15½	$0.15½
February	.15½	.15	.15½	.15½
March	.15½	.15½	.15½	.15½
April	.15½	.15½	.15½	.15½
May	.15½	.15½	.15½	.15½
June	.15½	.15½	.15½	.15½
July	.15½	.15½	.15½	.15½
August	.15½	.15½	.15½	.15½
September	.15½	.15½	.15½	.15½
October	.15½	.15½	.15½	.15½
November	.15½	.15½	.15½	.15½
December	.15½	.15½	.15½	.15½
Year	.15½	.15	.15½	.15½

Diphenylamine

In January, 1917, the price was $1.10 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.42	$0.42	$0.42	$0.42
February	.42	.42	.42	.42
March	.42	.42	.42	.42
April	.42	.42	.42	.42
May	.42	.42	.40	.40
June	.42	.42	.40	.40
July	.42	.42	.40	.40
August	.42	.42	.40	.40
September	.42	.42	.40	.40
October	.42	.42	.40	.40
November	.42	.42	.40	.40
December	.42	.42	.40	.40
Year	.42	.42	.42	.40

Nitrobenzene (*Double distilled*)

August 16, 1881, the price was 32c. per pound; October 18, 1891, 15c. 1901, 7¾c.; 1911, 6¾c.; 1913, 6½c.; 1917, February, 25c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08¼	$0.08¼	$0.09	$0.09
February	.08¼	.08¼	.09	.09
March	.08¼	.08¼	.09	.09
April	.09¼	.08¼	.09	.09
May	.09¼	.08¼	.09	.09
June	.09¼	.09¼	.09	.09
July	.09¼	.09¼	.09	.09
August	.09¼	.09¼	.09	.09
September	.09¼	.09½	.09	.09
October	.09¼	.09¼	.09	.09
November	.09¼	.09½	.09	.09
December	.09¼	.09	.09	.09
Year	.09½	.08¼	.09	.09

Metanitroparatoluidin

In September, 1918, the price was $7 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.70	$1.70	$1.50	$1.50
February	1.70	1.70	1.50	1.50
March	1.70	1.70	1.50	1.50
April	1.70	1.70	1.50	1.50
May	1.70	1.70	1.50	1.50
June	1.70	1.70	1.50	1.50
July	1.70	1.70	1.50	1.50
August	1.70	1.70	1.50	1.50
September	1.70	1.70	1.50	1.50
October	1.70	1.70	1.50	1.50
November	1.70	1.50	1.50	1.50
December	1.50	1.50	1.50	1.50
Year	1.70	1.50	1.50	1.50

Metaphenylenediamine

In June, 1917, the price was $2.05 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.84	$0.84	$0.84	$0.84
February	.84	.84	.84	.84
March	.84	.84	.84	.84
April	.84	.84	.84	.84
May	.84	.84	.84	.84
June	.84	.84	.84	.84
July	.84	.84	.84	.80
August	.84	.84	.80	.80
September	.84	.84	.80	.80
October	.84	.84	.80	.80
November	.84	.84	.80	.80
December	.84	.84	.80	.80
Year	.84	.84	.84	.80

Monoethylanilin

In September, 1918, the price was $1.85 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.05	$1.05	$1.05	$1.05
February	1.05	1.05	1.05	1.05
March	1.05	1.05	1.05	1.05
April	1.05	1.05	1.05	1.05
May	1.05	1.05	1.05	1.05
June	1.05	1.05	1.05	1.05
July	1.05	1.05	1.05	1.05
August	1.05	1.05	1.05	1.05
September	1.05	1.05	1.05	1.05
October	1.05	1.05	1.05	1.05
November	1.05	1.05	1.05	1.05
December	1.05	1.05	1.05	1.05
Year	1.05	1.05	1.05	1.05

Orthonitrophenol

In October, 1918, the price was $1.70 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.85	$0.85	$0.85	$0.85
February	.85	.85	.85	.85
March	.85	.85	.85	.85
April	.85	.85	.85	.85
May	.85	.85	.85	.85
June	.85	.85	.85	.85
July	.85	.85	.85	.85
August	.85	.85	.85	.85
September	.85	.85	.85	.85
October	.85	.85	.85	.85
November	.85	.85	.85	.85
December	.85	.85	.85	.85
Year	.85	.85	.85	.85

Orthonitrotoluene

In January, 1917, the price was 65c. per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.16	$0.16	$0.16	$0.16
February	.16	.16	.16	.16
March	.16	.16	.16	.16
April	.16	.16	.16	.16
May	.16	.16	.16	.16
June	.16	.16	.16	.16
July	.16	.16	.16	.16
August	.16	.16	.16	.16
September	.16	.16	.16	.16
October	.16	.16	.16	.16
November	.16	.16	.16	.16
December	.16	.16	.16	.16
Year	.16	.16	.16	.16

Orthotoluidin

In March, 1918, the price was $1.25 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.28	$0.27	$0.25	$0.25
February	.27	.27	.25	.25
March	.27	.27	.25	.25
April	.27	.25	.27	.25
May	.25	.25	.27	.27
June	.25	.25	.27	.27
July	.25	.25	.27	.27
August	.25	.25	.27	.27
September	.25	.25	.27	.27
October	.25	.25	.27	.27
November	.25	.25	.27	.27
December	.25	.25	.27	.27
Year	.28	.25	.27	.25

Paraminophenol, Base

In March, 1918, the price was $5.50 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.00	$1.00	$1.00	$1.00
February	1.00	1.00	1.00	1.00
March	1.00	1.00	1.00	1.00
April	1.00	1.00	1.00	1.00
May	1.10	1.00	1.00	.99
June	1.00	1.00	.99	.99
July	1.00	1.00	.99	.99
August	1.00	1.00	.99	.99
September	1.00	1.00	.99	.99
October	1.00	1.00	.99	.99
November	1.00	1.00	.99	.99
December	1.00	1.00	1.25	.99
Year	1.00	1.00	1.25	.99

Paranitranilin

In October, 1918, the price was $1.90 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.52	$0.52	$0.51	$0.51
February	.52	.52	.51	.51
March	.52	.52	.51	.51
April	.52	.52	.51	.51
May	.52	.52	.51	.51
June	.52	.52	.51	.51
July	.52	.52	.51	.51
August	.52	.52	.51	.51
September	.52	.52	.51	.51
October	.55	.55	.51	.51
November	.55	.55	.51	.51
December	.55	.55	.51	.51
Year	.55	.52	.51	.51

Paranitrophenol

In June, 1918, the price was $1.40 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.55	$0.55	$0.50	$0.50
February	.55	.55	.50	.50
March	.55	.55	.50	.50
April	.55	.55	.50	.50
May	.55	.55	.50	.50
June	.55	.55	.50	.50
July	.55	.55	.50	.50
August	.55	.55	.45	.45
September	.55	.55	.45	.45
October	.55	.50	.45	.45
November	.50	.50	.45	.45
December	.50	.50	.45	.45
Year	.55	.50	.50	.45

Paratoluidin

In January, 1918, the price was $2.50 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.40	$0.40	$0.38	$0.38
February	.40	.40	.38	.38
March	.40	.40	.38	.38
April	.39	.39	.38	.38
May	.39	.39	.38	.38
June	.39	.38	.38	.38
July	.38	.38	.38	.38
August	.38	.38	.38	.38
September	.38	.38	.38	.38
October	.38	.38	.38	.38
November	.38	.38	.38	.38
December	.38	.38	.38	.38
Year	.40	.38	.38	.38

Phthalic Anhydride, Technical

In December, 1917, the price was $6 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.18	$0.18	$0.18	$0.18
February	.18	.18	.18	.18
March	.18	.18	.18	.18
April	.18	.18	.18	.18
May	.18	.18	.18	.18
June	.18	.18	.18	.18
July	.18	.18	.18	.18
August	.18	.18	.18	.18
September	.18	.18	.18	.18
October	.18	.18	.18	.18
November	.18	.18	.16	.16
December	.18	.18	.16	.16
Year	.18	.18	.18	.16

Resorcinol, Technical

In December, 1911, the price was 80c. per pound; 1917, December, $9.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.25	$1.25	$1.25	$1.25
February	1.25	1.25	1.25	1.15
March	1.25	1.25	1.15	1.15
April	1.25	1.25	1.15	1.15
May	1.25	1.25	1.15	1.15
June	1.25	1.25	1.15	1.15
July	1.25	1.25	1.15	1.15
August	1.25	1.25	1.15	1.15
September	1.25	1.25	1.15	1.15
October	1.25	1.25	1.15	1.15
November	1.25	1.25	1.15	1.15
December	1.25	1.25	1.15	1.15
Year	1.25	1.25	1.25	1.15

Tolidin Base

In June, 1918, the price was $3 per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.89	$0.89	$0.86	$0.86
February	.89	.86	.86	.86
March	.86	.86	.86	.86
April	.86	.86	.86	.86
May	.86	.86	.86	.86
June	.86	.86	.86	.86
July	.86	.86	.86	.86
August	.86	.86	.86	.86
September	.86	.86	.86	.86
October	.86	.86	.86	.86
November	.86	.86	.86	.86
December	.86	.86	.86	.86
Year	.89	.86	.86	.86

Xylidin

In January, 1918, the price was 90c. per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.37	$0.37	$0.37	$0.37
February	.37	.37	.37	.37
March	.37	.37	.37	.37
April	.37	.37	.37	.37
May	.37	.37	.37	.37
June	.37	.37	.37	.37
July	.37	.37	.37	.37
August	.37	.37	.37	.37
September	.37	.37	.37	.37
October	.37	.37	.37	.37
November	.37	.37	.37	.37
December	.37	.37	.37	.37
Year	.37	.37	.37	.37

British and French Chemical Activities

British trade in heavy chemicals showed steady improvement in 1929 despite recessions in some consuming industries, according to a report from the acting commercial attache at London to the Department of Commerce. The downward tendency in prices of the past few years appeared to be leveling off at the close of 1929.

Compared with 1928 there were increased exports of sulphuric acid, soda ash and sal soda, glauber's salt and zinc oxide. Decreases were the rule in tartaric acid, glycerin, potash compounds, caustic soda, sal ammoniac, bleaching powder, and blue vitriol. Production of sulphuric acid amounted to 966,700 tons in the twelve months ended September 30, against 1928 production of 908,000 tons. Sulphuric acid plants in 1929 operated 71 percent of capacity, compared with 66 percent in 1928. Larger domestic production of nitric acid is planned for 1930 along with other chemicals.

The year 1929 was regarded as successful for the French chemical industry as a whole, notwithstanding that exports were merely maintained at the 1928 level and imports increased. The first six months started off with heavier production and sales in all branches, followed by a restriction in the activity in export markets because of increased prices, running from 10 to 15 percent above the 1928 level. Industrial chemical activity was slightly above that of 1928. Production of sulphuric acid increased 25,000 metric tons. Sodas remained unchanged. Domestic nitric acid requirements were entirely met by the synthetic production.

Dyestuffs and Tanstuffs: Market Review

While the usual complaints were heard that the margins of profit available for the handlers of these products were even scantier in 1929 than they had been in the year preceding, the fact was that business as a whole shaped up quite favorably. It was rather an anomalous situation that production of tanning extracts was kept at a rather high pitch throughout the year in the face of a drastic curtailment in production of sole leather, sole leather offal, and various other descriptions of leather, including heads, bellies, and harness leather. Small wonder, then, that business in the group as a whole, while coming well up to the totals of the year before, was less remunerative from the producer's standpoint. This was aptly illustrated through the decline in the weighted index numbers for nineteen typical dyestuffs and tanstuffs which at the start of the year stood at 154.0, but which had undergone a gradual decline until at the end of the year this index stood at 149.0, a decline of 5 points.

An early Easter provided the first stimulus for increased output in the hide, leather and shoe lines during the first quarter of last year. New styles featuring combinations of colors with leathers of two or three shades used in one shoe came into vogue, all of which resulted in a rather pronounced stepping up of production. According to one authoritative trade survey, production of sole leather in the first ten months of the year ending with October had fallen off some 11.8 percent to 12,054,000 pieces, as contrasted with 13,660,000 pieces in the same time in the year before. At the same time deliveries and wettings had fallen off 11.9 percent to 12,278,000 pieces, as against 13,931,000 pieces in the preceding year. Total deliveries were some 9.4 percent ahead of the corresponding preceding period at 13,268,000 pieces. Stocks in process were off 1.2 percent at 4,706,000 pieces, while a decrease of 28.5 percent was shown in tannery stocks to 2,286,000 pieces.

The production of belting leather showed a rather sharp increase in the amount of 12.5 percent to 811,000 butts. Wettings of this type of leather showed an even greater increase, amounting to 26.4 percent to 866,000 butts. Deliveries were up some 20.3 percent at 860,000 butts, while tannery stocks dropped some 29 percent to 169,000 butts. Operations in other divisions of the tanning industry were generally at a lower rate than in the preceding year. The production of sole leather offal, for example: Shoulders had fallen 0.9 percent in the first ten months of the year to 24,185,000 pounds in the face of an increase of 15.4 percent in deliveries to 24,197,000 pounds. Much the same condition was true in other descriptions of sole leather offal. The output of heads, for example, fell 10.3 percent to 8,205,000 pounds, while there was an increase in deliveries of 30.4 percent to 9,512,000 pounds, producing a decline of 27.9 percent in tanning stocks to 2,080,000 pounds.

The production of sole leather offal from bellies in the same period declined 15 percent to 55,157,000 pieces, in the face of an increase of 1.9 percent in deliveries, bringing the total to 59,025,000 pieces, producing a rather sharp decline in the tanning stocks of this grade to 10,137,000 pieces. The survey showed a rather marked decline in production of oak and union black harness leather, which declined some 28.2 percent to 548,000 sides. At the same time wettings fell off 31.8 percent to 533,000 sides, while deliveries, which had in the preceding year declined to a monthly total of about 45,000 sides, showed but slight improvement over these monthly averages and at the close of the ten months' survey revealed a net loss of 13.1 percent to 588,000 sides. In spite of this showing, tanners' finished stocks at the end of October stood at some 292,000 sides, which was 9.9 percent below the totals of the year before at this time.

Sales Show Increase

While the trend of dyestuffs and tanstuffs followed no regular course during the first quarter of the year, sales generally appeared to be in larger volume than they had been in the same quarter of the year before. From data collected at the end of the first quarter it became clear that production of tanning materials was running at the rate of about 103.4 percent of normal, whereas sales were at about 102.8 percent of normal, while prices were at about 96.6 percent of normal, and general marketing conditions at about 101.4 percent of normal. Collections had improved to 100 percent of normal at the end of the first quarter, whereas on January 1 they had been little better than 73 percent. This condition was not to contiune, however, for at the half year mark collections had fallen off to 55 percent of normal, although at the end of the third quarter they were again back to 89 percent of normal. It was generally conceded that business during the first quarter of the year had measured up to earlier expectations.

A mixture of optimism and uncertainty seemed to dominate the market during the second quarter. Conditions generally seemed to be sound enough, although it was felt that producers ought to be going ahead at a much faster rate than they actually were. A state of healthy competition had developed, but nothing in the nature of a summer slump could be pointed to. Both production and sales of dyestuffs and tanstuffs in the second quarter of the year were ahead of the totals of the year before, and the joint production of these manufacturers was rated at 102.8 percent of normal, whereas sales were running at the rate of about 103.7 percent of normal, while prices realized were about 94.8 percent of normal, and general conditions of the market at abort 100.7 percent of normal. Producers of tanning extracts had been successful in renewing contracts covering the majority of their products for shipment and delivery during the last half of the year prior to the end of the second quarter. It was natural enough, therefore, that the third quarter of the year should be one of slightly curtailed production, for this embraced the usual summer period of inertia when it is usual for producers to secure better alignment between supply and demand by rather concerted regulation of their activities.

The dragging out of the tariff revision program in Congress had rather a depressing influence on the market during the last half of 1929 although the feeling prevailed that tariff legislation would not materially hamper trading in the majority of the products coming under this category. During the third quarter the production of tanstuffs, dyestuffs, etc., was placed at about 101.1 percent of normal, while sales were at about 10.2 percent of normal; prices at about 94.5 percent of normal, and general conditions still averaging better than 100 percent of normal. It was noteworthy during the third quarter of the year that most dyestuffs and tanstuffs were meeting increased competition from synthetic materials with the resulting tendency to decrease costs and selling prices.

Irregular Price Trend Persists

As was the case in the year before a majority of the tanning products were decidedly irregular in price during 1929. No sooner had the trade gotten away from the lethargy accompanying the inventory period last year than a majority of the tanners over the country started cutting down operations in keeping with the reduced rate of consumer demand which had been shown. Early in the year foreign shippers were at sixes and sevens trying to contrive some manner to interest the average domestic tanner in offerings and in the absence of an adequate outlet primary market shippers found it necessary to rely to a greater extent than ever on the potential buying of Russian and Continental tanners.

Domestic tanners were making heroic efforts to work off the higher priced hides they had accumulated during the last half of 1928, but this was difficult as during the early months of the year tanners' operations were not conducted at much better than 33⅓ to 50 percent of normal. Sacrifice prices continued to rule in a great many products until well along in the spring when the first signs of a definite revival in buying interest made its appearance. At this time the leather markets began to take on a definitely firmer appearance and the schedules of shoe factories were stepped up in accordance with much larger production of summer shoes both for men and women. As the spring months wore into the summer, the contract movement in a great many natural extracts began to resume normal and marketing conditions on the whole were adjudged to be greatly improved.

The inauguration of trading in hides on the New York Hide Exchange early in the summer months was one of the developments which prompted the revival of a great deal of interest in the market. The tanner who had been exposed to many speculative happenings during the period of six to eight months which must elapse in the interval during which hides are converted into leathers, was thus enabled to take advantage of the hedging features offered to producers through the organization of the new exchange, the advent of which served as a stabilizing medium throughout the hide and leather industry.

While the usual summer quietude featured the market for the majority of these products during the months of July and August and for the greater part of September, the fact was that shoe manufacturers and other branches of the leather industry started reporting record breaking sales towards the end of the summer and that considerable quantities of tanning materials were being taken out of the market every week. Towards the height of the fall season tanning factories continued to operate at a rather brisk rate because shoe factories had already absorbed considerable quantities of the foreign leathers which had at this time been offering at sacrifice prices. This situation led to a rather extensive buying movement during the month of October and much natural stock was accordingly moved into consuming quarters of the trade.

During the spring of 1929 the market for natural dyestuffs suffered from the many interruptions which had taken place in operations in the Southern markets. At this time there was every evidence of overdevelopment in the South so that a corrective movement there led to strikes and dissension resulting in the suspension of many mills. The earlier migration of many of the plants which had been located in New England to the South was one of the moot factors leading to overproduction. It was found, for example, that some 18,713,212 spindles were in place in the South, of which number some 18,070,204 were active as compared with 16,088,468 in place in New England, of which only 12,414,904 were active. It was the introduction of the so-called "stretchout" system in the Southern mills which led to so much of the dissension between mill owners and operatives.

Statistics were assembled showing that under the new efficiency system mills were operated with a considerably fewer number of operators, while the wages of those remaining were drastically lowered so that the mill owners were deriving the principal benefits from the operations. The problem of overproduction in the South was given much consideration during the year, but no method was worked out which could be construed as final. Operatives finally went back to work, but they were still clamoring for higher wages and shorter hours and better industrial conditions.

So far as the cotton goods industry in general was concerned, it was still operating at a relatively high rate, although there was every evidence that total production would drop appreciably below the record output of 9,000,000,000 square yards of 1927 when cotton was from 4c. to 8c. per bale cheaper than it was during 1929. At the same time consumption of cotton goods was running along at practically record totals. In the first nine months of the year the cotton spinning industry was operating at better than 106.6 percent of single shift capacity, which has only happened twice before in the history of the industry.

Stabilizing Sicilian Sumac

Additional progress was made towards recovery in the position of Sicilian sumac. It will be recalled that during the summer of 1928 prices had reacted to as low as $54 per ton. The effort in the early part of last year was to get prices back to a basis which would prove remunerative to the Sicilian growers. The year started with prices at $75 per ton for shipment. Towards the end of February the market eased to $70, as demand was rather light. At this time efforts were under way to perfect the formation of a cartel among Sicilian shippers, all but one of them having agreed that prices should be stabilized and that overproduction should be stopped. Subsequently it developed that the value of the exports from Palermo had declined some 38 percent from the totals of 1927. The shipments of the ground in 1928 had only amounted to 2,929 tons, whereas in 1927 these shipments had totaled 3,593 tons. Shipments of the leaf in 1928 were but 524 tons, while in 1927 they were 283 tons. In recognition of the series of advances which took place during the early fall months in the primary markets a basis of $80 per ton was hit in October. It developed later that the 1929 harvest in Sicily was a fair one, although the heavy rains which had been experienced had damaged the quality to some extent. As a result the price basis eased slightly again at the end of the year, when the product became available at as low as $72.

Although the general outlet for natural tanning materials was perhaps somewhat more restricted during 1929 than it had been in the preceding year, fair prices were realized as a general proposition for most products. In the case of myrobalans J-1s prices were at a basis of $43 per ton in January, only to show a gradual decline, until in July they had gotten down to a basis of $39 per ton. Later in the summer months reports of drought reached here from India, with rumors that the fruit of the plants had been quite badly scorched, with the result that a rather substantial price improvement shortly started to assert itself. The market weakened again at the end of the year, when offers of the J-1s made their appearance at as low as $37 per ton, although these offers were for as far ahead as May-June, 1930. Other descriptions of myrobalans did not fare much better than the J-1s, the J-2s closing the year at $26 to $27 per ton, whereas the R-2s were being held at $23.75 to $24 per ton for shipment. Venezuelan divi divi sustained a rather steady price decline, starting the year around $57 per ton and easing to about $46 per ton by September. The weaker tone of the raw material had not influenced the extract, for which the producers were successful in signing contracts in fully as large a volume as in the preceding year.

Other natural products followed no well-defined course. Advances and declines were fairly well divided early in the year. Many of the tanneries were only operating at around 33 percent of normal at this period, so that the inevitable absence of important buying finally produced weakness. Much of this was, however, offset by increased foreign and domestic buying of hemlock, chestnut, and oak bark extracts. Declines were sharp and precipitate during February and early March, at which time the American shoe leather industry was asking for a 20 percent ad valorem duty on calf, goat and kid leather for the purpose of bringing relief to the tanning business east of the Mississippi river. At about this time the bottom appeared to fall out of the market on mangrove bark, which could be had for as low as $30 to $32.50 per ton. Large offerings of all grades of valonia were here at the same time from Asia Minor, which served to depress the market to $51.50 to $54 per ton for the 42 percent beards, while the mixtures could be had for as low as $36 per ton. Later in the year the beards declined to $42 per ton for shipment, the cups to $30 and the mixtures to $33 to $34 per ton for shipment.

By April most leather factories over the country had resumed normal operations, with shoe plants fairly busy on spring and summer styles for men and women. During the last half of the year the general market position was reported to be rather well maintained. Operations of not a few of the shoe manufacturing plants were running from 15 to 25 percent ahead of the totals of the preceding year. Since the tanners had been using up most of the surplus raw material they had acquired earlier in the year, the undertone of the market stiffened somewhat as new purchases were arranged. During September the producers of 63 percent solid as well as 64 percent liquid quebracho extract announced declines in the amount of ¼c. per pound. Activity in the closing days of the year consisted largely of the renewal of contracts for tanning extracts for the first six months of 1930.

The market for natural dyestuffs went through a rather uneventful period. Common gambier was off ⅝c. per pound at one time to 5½c. per pound, but recovered to 6c. Cochineal could be had for 95c. per pound when wanted. The encroachment of the synthetic product into the field occupied by natural indigo went even further than in the preceding year, but last year there was an increase of close to 21 percent in the output of the natural product in India. In the Madras Presidency, where close to 50 percent of all the indigo is grown, there were 34,600 acres under indigo at the end of August, compared with 28,500 in the same time in the year before. If this entire amount were converted into indigo it would amount to about 8,000 hundredweights, as against 6,460 hundredweights in the same time in the year before. The shipment quotations for fustic and logwood from primary points in Latin America remained substantially unchanged throughout the year. Fur dryers were in the market for substantial quantities of logwood extract during the spring months, although this buying tapered off as summer approached. The strength of fustic produced sympathetic firmness in osage orange, a coloring matter extensively utilized in its place.

Uniformity in Corn Products

Although there were numerous changes up and down in the quoted prices for corn products early in 1929, the fact was that the market as a whole held quite steady within the quoted range. There was a sharp readjustment of the scheduled quotations early in the year, when dextrin was cut 30c. per 100 pounds and corn starches 40c. Quantity buyers had previously been securing the benefits of some big trade allowances, and the action of producers in lowering their schedules was to promote uniform marketing conditions. Later on in January producers inclined to the belief that their earlier action in the matter of making so deep a cut into these products had been premature. They accordingly revised their selling prices upwards again, the advance this time amounting to 15c. per 100 pounds. These prices evidently proved to be quite attractive to the rank and file of consumers, for the price basis was well maintained throughout the first three quarters of the year and down to the month of September, when an upward

revision in the amount of 10c. per 100 pounds came under review. The last advance was based on fears of a short corn crop, numerous reports having been circulated to the effect that frosts would greatly curtail the production. These proved to be unfounded, however, and early in December prices for starches and dextrin were again brought back to the same stable basis which had ruled practically throughout the year.

Corn was disappearing into consuming circles at so fast a rate during the early part of last Spring that reserves as of March 1 had dwindled to something in the vicinity of 700,000,000 bushels. The early prospects for the corn crop were none too good, but the first intimations of a probable shortage did not come along until toward the first of September when estimates placed the total at not much better than 2,509,000,000 bushels, which would be the smallest out-turn in a period of sixteen years. The heat and drought seemed to have taken an exceptionally heavy toll of the corn crop and the paring down of private estimates continued until the latter part of September when the first frost reports began to reach the market. Weather conditions in October, however, turned out to be exceptionally favorable and the crop reporting board of the Department of Agriculture estimated the condition of the corn crop as of November 1, 1929, at 80.2 percent of a normal, compared with 71 percent on October 1, 67.9 percent on September 1, 1929, and 82.9 percent on November 1, 1928.

The board placed the production of corn at 2,621,451,000 bushels, compared with 2,528,000,000 on October 1, 1929; 2,456,000,000 on September 1, 1929, and 2,836,000,000 in 1928. The yield per acre was placed at 26.7 bushels, compared with 25.7 on October 1, 1929, 25 on September 1, and 28.2 in 1928. The preliminary estimate of corn production in the United States showed an increase of 93,000,000 bushels or 3.7 percent over the October 1 forecast. Practically all of the important producing states showed an increase during the month of October. The 1929 crop was, however, relatively a short crop. It was 7.7 percent below the 1928 crop, and 4.6 percent below the five-year average.

Farm stocks of old corn on November 1 were estimated at 76,863,000 bushels, a considerable increase over stocks of November, 1928, of 54,000,000 bushels, but 29 percent less than the five years average of stock of 180,000,000 bushels. Combining 1929 production with the farm stocks of November 1, the farm supply of corn last season was 2,698,000,000 bushels, which was 6.6 percent less than last year.

Diversified Uses for Bichromates

It will be recalled that in the Spring of 1928 all of the more important raw materials for the production of bichromates had touched new high levels. This was particularly true with reference to chrome ore and sulphur. In addition there was another boost in ocean freight rates from New Caledonia, in New Zealand, all of which lent a tone of exceptional firmness to the marketing situation. In 1928 the producers had established the market for the soda on the basis of 7c. per pound car lots, works, and 7¼c. per pound in casks, less than car lots works, while quoting the potash descriptions at 9c. per pound in minimum car lots of 36,000 pounds in casks, and at 9¼c. per pound in less than carload lots in casks f.o.b. the works. A large volume of shipments was arranged at these prices to consumers in virtually all of the more important trades including those in the color, textile, tanning, printing ink and chromium plating fields. The large domestic outlet was supplemented by steady requisitions on supplies by foreign buyers early in the year, but this buying showed a tendency to slacken off toward the end of the year. In the first nine months of 1929 ending with September some 3,161,094 pounds of bichromate and chromate of soda were exported as contrasted with 6,114,974 pounds in the corresponding period of the year before. The extremely active period in the shoe manufacturing lines during the summer and early Fall made for a considerable volume of buying for the account of domestic tanners.

Quite early in the Fall, in the first week in October to be exact, producers of bichromates announced that contract prices for 1930 deliveries would be substantially unchanged from the levels that had ruled in 1929. That is in the case of the soda, minimum lots of 75,000 pounds in casks were quoted at 7c. per pound less 1 percent, while in minimum lots of 300,000 pounds in casks the price was 7c. per pound less 2 percent. For smaller quantities in less than carload lots the quotations for the soda stood at 7¼c. per pound in casks. The potash variety for 1930 delivery also remained substantially unchanged with large lots of 300,000 pounds quoted at 8¾c. per pound in casks, whereas for smaller quantities the price range was from 9c. to 9¼c. per pound also in casks. The action of producers in continuing their former price schedules in the face of still higher raw material costs, especially in view of another rise of 6c. per 100 pounds in the costs of transporting chrome ore from the primary markets, was favorably construed by the rank and file of consumers and contracting progressed at such a favorable rate during the early Fall months that by the middle of November fully 90 percent of the large buyers had already covered all their requirements, so that only a few contracts from smaller consumers remained to be placed.

Comparative Values

The general tendency of most of the natural tanning products was distinctly downward during the first quarter of the year, although the market, as a whole, appeared to be backing and filling, being influenced by the vagaries of the buying movement. As a result of this the comparative index number of the Oil, Paint and Drug Reporter for nineteen typical dyestuffs and tanstuffs only showed a loss of 1.7 points during the first quarter to 152.3. Declines proved to be progressive throughout the year, however. At the half year mark averages had declined to 149.9, and during the last quarter prices were off to 148.3, only to recover again to 148.9. Weakness in myrobalans, sumac, divi-divi, and Chinese egg products did much to depress the general level of the market. The following gives a comparison of the index numbers for the first four quarters of the year, with the December 31 figure attached.

Jan. 1	April 1	July 1	Oct. 1	Dec. 31
154.0	**152.3**	**149.9**	**148.9**	**148.9**

While there appeared to be almost as many advances as declines in the first half of the year, the downward trend seemed to preponderate so far as the raw materials were concerned. The producers of dye and tanning extracts were taking shipments in a volume which was fully up to normal, despite the gradual recessions which were taking place in the general run of raw materials. In the case of valonia, offers from Asia Minor continued to come through in rather large volume, while sumac was being offered with increasing freedom from the primary market points in Sicily.

The likelihood of higher American import duties at this time on Chinese egg products had a tendency to cut down the size of offerings and prices were quite firm for a while. As is usual during the month of July, business in liquid egg yolk at Shanghai, China, was practically at a standstill, due largely to the fact that supplies were limited, notwithstanding better transportation facilities in the interior, according to the Department of Commerce. As the month progressed little business was done because the Chinese market was out of line with home prices. Toward the end of July, exchange took an unfavorable turn which nullified any prospects that there might have been for an early revival of interest. However, buyers re-entered the market early in August in the hope of buying at better prices for late autumn shipment. The dealers were unwilling to contract for forward business in view of the unsettled nature of the Manchurian situation. At the end of August, as buyers would not pay the prices demanded, a number of dealers in liquid egg yolk withdrew from the market. During September, there were more inquiries for this product, principally from Europe, but as supplies were relatively scarce, transactions were limited in quantity. The approach of the mid-autumn festival, which fell on September 17, was another reason for dealers to withdraw from the market, and for about ten days immediately preceding that holiday, practically no business was transacted in egg products. Shanghai egg factories were able to operate only part time because of the shortage of raw materials.

Logwood and Quebracho Active

Logwood dyes met a rather urgent demand from fur buyers during the first quarter of the year, but this buying started to taper off with the advent of warmer seasonal weather. The leather and tanning industries were operating extensively on automobile upholstery during the first half of the year and much raw material was consequently diverted in this direction. There was an uninterrupted import movement from the West Indies in such raw materials as logwood, fustic hypernic and other products from the West Indies, and this preserved a tone of comparative steadiness in these products. A much more liberal contract movement got under way in quebracho and chestnut extracts as the summer months wore on At the same time the foreign owned egg products factories in China got in operation after several months of inactivity.

Early in the fall producers placed a reduction of ¼c. per pound into effect in quebracho extract, the solid 63 percent being cut to 5c. to 5½c. per pound in bags, and the clarified 64 percent to 5¾c. per pound in bags. The textile and dye trades had at this time resumed normal fall operations. The import duty in each instance amounting to $15 per ton was for buyers' account. Later on in the year there was a sympathetic decline in the liquid, which was reduced to 3c. per pound in tanks, 3½c. per pound car lots, barrels, and 3¾c. per pound less than car lots, barrels. Subsequently a survey was conducted of the quebracho industry and reports which were substantiated from London and Buenos Ayres disclosed that since September 1 the large stocks of quebracho extract had been reduced to the normal quantity and the sales during this period for delivery during the first half of next year had been large. It was believed that the Argentine and other quebracho plants, which had been closed since about June 1, would resume operations shortly on account of the much improved market conditions.

U. S. Big Buyer of China Nutgalls

China's exports of nutgalls in 1927, the latest year for which statistics covering the whole of China were available, amounted to 6,830 tons, valued at $1,155,000. Of this amount, the United States took 26 percent; Great Britain, 12 percent; Belgium, 11 percent; Hong Kong, 11 percent; Germany, 11 percent; Japan, 8 percent; France, 8 percent, and the Netherlands, 7 percent. Chungking, Hankow, Yochow, and Wanhsien, all in the Yangtze Valley, are the principal ports of original export. Hankow, however, is by far the largest center as regards exports to foreign countries. In 1928 the exports, including re-exports, of nutgalls from Hankow amounted to 4,025 tons, valued at $714,000. The declared exports from Hankow to the United States in 1928 amounted to 1,168 tons, valued at $274,000, whereas the declared exports for the first eight months of 1929 amounted to 702 tons, valued at $149,000. The price of plum-shaped nutgalls, October 1, 1929, was about 1½ cents United States currency per pound, c.i.f., New York. The Hankow market had been firm for some time at about 19.00 Hankow taels per picul (one Hankow tael equals about $0.55 United States currency; one picul equals 133⅓ pounds).

Outlook for Australian Karri Bark

Karri (eucalyptus diversicolor) occurs in dense forests in the extreme southwest of Western Australia, stated an article in the August issue of the "Journal of the Council for Scientific and Industrial Research" (Melbourne). The timber is extensively milled at several centers and the bark, which is very thick and dense, is wasted in the bush or is burnt at the mills. The results of analyses of karri bark varied from 11 to 22 percent of the bark (at 14 percent moisture). Possibly differences in locality may have accounted in some measure for this wide divergence. In the wet season, the green bark has an average approximate moisture content of 60 percent estimated on the weight of green bark. From this it is calculated that the average quantity of tanning material at present being destroyed or wasted is sufficient to yield daily approximately 5.5 tons of extract containing 30 percent tans. In view of this waste and the shortage of locally-produced tanning materials, there appears to be sufficient grounds for an investigation in the possibilities of producing karri tannin extract commercially.

Dyestuffs and Tanstuffs: Record of Prices

Chemicals

Antimony Salt

October 18, 1871, the price was 11c. per pound; 1881, 6c.; 1891, 4c.; 1901, 16c.; 1911, 12c.; 1913, 11½c.; 1918, November, 75c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.25½	$0.25½	$0.25½	$0.25½
February	.25½	.25½	.25½	.25½
March	.25½	.25½	.25½	.25½
April	.25½	.25½	.25½	.25½
May	.25½	.25½	.25½	.25½
June	.25½	.25½	.25½	.25½
July	.25½	.25½	.25½	.24
August	.25½	.25½	.24	.24
September	.25½	.25½	.24	.24
October	.25½	.25½	.24	.24
November	.25½	.25½	.24	.24
December	.25½	.25½	.24	.24
Year	.25½	.25½	.25½	.24

Potash Bichromate

October 8, 1871, the price was 23c. per pound; 1889, 16c.; 1891, 9¾c.; 1901, 8¼c.; 1911, 7¾c.; 1913, 6¾c.; 1917, September, 50c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.08	$0.09	$0.09
February	.08	.08	.09	.09
March	.08¼	.08	.09	.09
April	.08¾	.08¾	.09	.09
May	.08¾	.08¾	.09	.09
June	.08¾	.08¾	.09	.09
July	.08¾	.08¾	.09	.09
August	.08¾	.08¾	.09	.09
September	.08¾	.08¾	.09	.09
October	.08¾	.08¾	.09	.09
November	.08¾	.08¾	.09	.09
December	.09	.08¾	.09	.09
Year	.09	.08	.09	.09

Soda Acetate

October 18, 1871, the price was 58c. per pound; 1881, 40c.; 1891, 33c.; 1901, 4¼c.; 1911, 4c.; 1913, 3¾c.; 1918, July, 35c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05¾	$0.05¾	$0.05	$0.05
February	.06	.05¾	.05	.05
March	.05¾	.05¾	.05½	.05
April	.06	.05¾	.05½	.05½
May	.05¾	.05½	.05¾	.05½
June	.05½	.05½	.06½	.05¾
July	.05½	.05½	.06¼	.05
August	.05½	.05½	.05	.05
September	.05½	.05½	.05¾	.05
October	.05½	.05½	.05¾	.05
November	.05½	.05	.05	.04⅞
December	.05	.05	.04⅞	.04⅞
Year	.06	.05	.06½	.04⅞

Potash Prussiate, Yellow

October 18, 1871, the price was 41c. per pound; 1881, 23c.; 1891, 23¾c.; 1901, 13½c.; 1911, 13c.; 1913, 14c.; 1918, January, $1.30.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.18	$0.18	$0.19	$0.19
February	.18	.17½	.18½	.18½
March	.17½	.17½	.18½	.18½
April	.17¾	.17½	.18½	.18½
May	.17½	.17½	.18½	.18½
June	.18	.17½	.18½	.18½
July	.18	.17½	.18½	.18½
August	.17½	.17½	.18½	.18½
September	.17½	.17½	.18½	.18½
October	.19	.17½	.18½	.18½
November	.19	.19	.18½	.18½
December	.19	.19	.18½	.18½
Year	.19	.17½	.19	.18½

Soda Bichromate

October 18, 1881, the price was 14¾c. per pound; 1891, 8c.; 1901, 6¼c.; 1911, 5⅝c.; 1913, 4⅝c.; 1919, December, 35c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06¼	$0.06¼	$0.07	$0.07
February	.06¼	.06¼	.07	.07
March	.06¼	.06¼	.07	.07
April	.07	.07	.07	.07
May	.07	.07	.07	.07
June	.07	.07	.07	.07
July	.07	.07	.07	.07
August	.07	.07	.07	.07
September	.07	.07	.07	.07
October	.07	.07	.07	.07
November	.07	.07	.07	.07
December	.07	.07	.07	.07
Year	.07	.06¼	.07	.07

Soda Prussiate, Yellow

December 8, 1880, the price was 25c. per pound; October 18, 1891, 22c.; 1901, 10¼c.; 1911, 10¾c.; 1913, 10½c.; 1918, June, 75c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.12	$0.12	$0.11½	$0.11½
February	.12	.11½	.11½	.11½
March	.11½	.11½	.11½	.11½
April	.11½	.11½	.11½	.11½
May	.11½	.11½	.11½	.11½
June	.11½	.11	.11½	.11½
July	.11	.11	.11½	.11½
August	.11	.11	.11½	.11½
September	.11	.11	.11½	.11½
October	.12	.11	.11½	.11½
November	.12	.12	.11½	.11½
December	.12½	.12	.11½	.11½
Year	.12½	.11	.11½	.11½

Tin Crystals

October 18, 1871, the price was 45c. per pound; 1881, 16½c.; 1891, 14c.; 1901, 20c.; 1911, 25½c.; 1913, 27½c.; 1918, September, 70c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.42	$0.40½	$0.37½	$0.37½
February	.40	.39	.37½	.37
March	.39	.38	.37	.37
April	.39½	.39	.37	.35
May	.38½	.38½	.35	.34½
June	.38	.36½	.35	.34
July	.36½	.36	.36½	.35
August	.37	.36½	.36	.36
September	.37	.36½	.36	.35
October	.37½	.36½	.35	.33
November	.38	.37½	.33½	.32½
December	.39	.37½	.32½	.32½
Year	.42	.36	.37½	.32½

Zinc Dust

March 23, 1881, the price was 15¼c. per pound; October 18, 1891, 7½c.; 1901, 5¾c.; 1911, 7¼c.; 1913, 6½c.; 1916, January, 35c.

	Per pound— 1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.08	$0.08¾	$0.08½
February	.08	.08	.08½	.08½
March	.08	.08	.08½	.08½
April	.08¾	.08	.08½	.08½
May	.08¾	.08¾	.08½	.08½
June	.08¾	.08¾	.08½	.08½
July	.08¾	.08¾	.08½	.08½
August	.08¾	.08¾	.08½	.08½
September	.08¾	.08¾	.09½	.08½
October	.08¾	.08¾	.09½	.09½
November	.08¾	.08¾	.09½	.09½
December	.08¾	.08¾	.09½	.08
Year	.08¾	.08	.09½	.08

Dyestuffs and Sizes

Albumen, Egg

October 18, 1871, the price was $1.25 per pound; 1881, 75c.; 1891, 33c.; 1901, 35c.; 1911, 50c.; 1913, 42c.; 1918, July, $2.40.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.83	$0.83	$0.78	$0.78
February	.80	.80	.78	.76
March	.80	.78	.79	.79
April	.78	.78	.79	.79
May	.78	.78	.79	.79
June	.80	.80	.79	.77
July	.80	.80	.77	.76
August	.80	.80	.76	.76
September	.80	.80	.76	.75
October	.78	.78	.75	.75
November	.78	.78	.75	.75
December	.78	.78	.75	.75
Year	.83	.78	.79	.75

Annatto Seed

October 18, 1871, the price was 30c. per pound; 1881, 20c.; 1891, 10c.; 1901, 8c.; 1911, 32c.; 1913, 7c.; 1917, January, 17c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07¼	$0.07¼	$0.08	$0.08
February	.07¼	.07¼	.08	.08
March	.07¼	.07¼	.08	.08
April	.07¼	.07¼	.09	.08
May	.07¼	.07¼	.09	.09
June	.07¼	.07¼	.09	.09
July	.07¼	.07¼	.09	.09
August	.07¼	.07¼	.09	.09
September	.07¼	.07¼	.09	.09
October	.07¼	.07¼	.09	.09
November	.07½	.07½	.09	.09
December	.07½	.07½	.09	.09
Year	.07½	.07¼	.09	.08

Cochineal, Gray

October 18, 1871, the price was 67½c. per pound; 1881, 43c.; 1891, 27c.; 1901, 20c.; 1911, 25½c.; 1913, 45c.; 1918, November, $1.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.84	$0.84	$0.95	$0.95
February	.84	.84	.95	.95
March	.84	.84	.95	.95
April	.84	.84	.95	.95
May	.84	.84	.95	.95
June	.84	.84	.95	.95
July	.84	.84	.95	.95
August	.84	.84	.95	.95
September	.95	.95	.95	.95
October	.95	.95	.95	.95
November	.95	.95	.95	.95
December	.95	.95	.95	.95
Year	.95	.84	.95	.95

Cutch, Borneo

October 18, 1871, the price was 4½c. per pound; 1881, 5¾c.; 1891, 7½c.; 1901, 4¾c.; 1911, 5¾c.; 1913, 6c.; 1918, November, 27c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07	$0.07	$0.08	$0.08
February	.07	.07	.08	.08
March	.07	.07	.08	.08
April	.07½	.07	.08	.08
May	.08	.08	.08	.08
June	.08	.08	.08	.08
July	.08	.08	.08	.08
August	.08	.08	.08	.08
September	.08	.07½	.08	.08
October	.07¼	.07½	.08	.08
November	.08	.07½	.08	.08
December	.08	.08	.08	.08
Year	.08	.07	.08	.08

Dextrin, Corn

October 18, 1871, the price was $8 per 100 pounds; 1881, $6.40; 1891, $6; 1901, $2.70; 1911, $2.87; 1913, $3.17; 1918, June, $9.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$4.02	$3.77	$4.62	$4.47
February	4.27	4.02	4.62	4.62
March	4.42	4.27	4.62	4.62
April	4.82	4.52	4.62	4.62
May	4.82	4.82	4.62	4.62
June	4.92	4.82	4.62	4.62
July	4.92	4.92	4.62	4.62
August	4.92	4.77	4.63	4.62
September	4.77	4.77	4.72	4.72
October	4.77	4.77	4.72	4.72
November	4.77	4.77	4.72	4.72
December	4.77	4.77	4.72	4.62
Year	4.92	3.77	4.72	4.47

Dextrin, Potato

May 24, 1881, the price was 8c. per pound; October 18, 1881, 7c.; 1901, 5½c.; 1911, 5½c.; 1913, 6c.; 1918, July, 20½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08½	$0.08½	$0.08	$0.08
February	.08½	.08	.08	.08
March	.08	.08	.08	.08
April	.08	.08	.08	.08
May	.08	.08	.08	.08
June	.08	.08	.08	.08
July	.08	.08	.08	.08
August	.08	.08	.08	.08
September	.08	.08	.08	.08
October	.08	.08	.08	.08
November	.08	.08	.08	.08
December	.08	.08	.08	.08
Year	.08½	.08	.08	.08

Sago Flour

October 18, 1871, the price was 8¾c. per round; 1881, 3¾c.; 1889, 4c.; 1901, 2¾c.; 1911, 2¾c.; 1913, 2¾c.; 1918, August, 10½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.04½	$0.04½	$0.04½	$0.04½
February	.04½	.04½	.04½	.04½
March	.04½	.04½	.04½	.04½
April	.04½	.04½	.04½	.04½
May	.04½	.04½	.04½	.04½
June	.04½	.04½	.04½	.04½
July	.04½	.04½	.04½	.04½
August	.04½	.04½	.04½	.04½
September	.04½	.04½	.04½	.04½
October	.04½	.04½	.04½	.04½
November	.04½	.04½	.04½	.04½
December	.04½	.04½	.04½	.04½
Year	.04½	.04½	.04½	.04½

Myrobalans J1

October 18, 1881, the price was $38 per ton; 1891, $35; 1901, $35; 1911, $23; 1913, $28; 1917, February, $68.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$43.00	$43.00	$43.00	$42.00
February	45.00	43.00	42.00	39.00
March	45.00	44.50	40.50	39.50
April	44.00	42.00	39.50	38.00
May	45.00	45.00	39.50	39.00
June	45.00	45.00	39.00	39.00
July	45.00	42.00	39.00	36.00
August	45.00	42.00	39.50	38.50
September	45.00	45.00	40.00	38.50
October	45.00	43.00	40.00	39.50
November	43.00	42.00	41.00	40.00
December	42.00	41.00	41.00	37.00
Year	45.00	41.00	43.00	37.00

Divi-Divi

October 18, 1871, the price was $85 per ton; 1881, $70; 1891, $75; 1901, $32; 1911, $45; 1913, $45; 1919, November, $87.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$60.00	$52.00	$57.00	$56.00
February	60.00	57.00	56.00	55.00
March	62.00	60.00	54.00	52.00
April	60.00	60.00	50.00	50.00
May	60.00	60.00	50.00	49.00
June	60.00	59.00	49.00	49.00
July	59.00	57.00	49.00	48.00
August	57.00	57.00	48.00	47.50
September	58.00	58.00	47.50	46.50
October	58.00	57.00	46.50	46.00
November	58.00	57.50	48.00	46.00
December	57.50	57.00	46.00	46.00
Year	62.00	52.00	57.00	46.00

Fustic Sticks

October 18, 1871, the price was $22 per ton; 1881, $18; 1891, $26; 1901, $22; 1911, $22; 1913, $18; 1918, September, $80.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$25.00	$25.00	$25.00	$25.00
February	25.00	25.00	25.00	25.00
March	25.00	25.00	25.00	25.00
April	25.00	25.00	25.00	25.00
May	25.00	25.00	25.00	25.00
June	25.00	25.00	25.00	25.00
July	25.00	25.00	25.00	25.00
August	25.00	25.00	25.00	25.00
September	25.00	25.00	25.00	25.00
October	25.00	25.00	25.00	25.00
November	25.00	25.00	25.00	25.00
December	25.00	25.00	25.00	25.00
Year	25.00	25.00	25.00	25.00

Gambier Common

October 18, 1871, the price was 4¾c. per pound; 1881, 3¾c.; 1891, 5c.; 1901, 5¼c.; 1911, 6¾c.; 1913, 4½c.; 1916, December, 40c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07	$0.06½	$0.06¼	$0.06
February	.06¼	.06¼	.06	.06
March	.06¼	.06	.06	.06
April	.06	.05½	.05½	.05½
May	.05½	.05½	.05½	.05½
June	.05½	.05½	.05½	.05½
July	.05¼	.05¼	.05½	.05½
August	.05¼	.05¼	.05½	.05½
September	.05¼	.05¼	.05½	.05½
October	.05¼	.05¼	.06	.06
November	.05½	.05¼	.06	.06
December	.06¼	.05½	.06	.06
Year	.07	.05¼	.06¼	.05½

Logwood Sticks, Haitian

October 18, 1871, the price was $19 per ton; 1881, $18; 1891, $29; 1901, $15; 1911, $15; 1913, $15; 1918, September, $55.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$24.00	$24.00	$24.00	$24.00
February	24.00	24.00	24.00	24.00
March	24.00	24.00	24.00	24.00
April	24.00	24.00	24.00	24.00
May	24.00	24.00	24.00	24.00
June	24.00	24.00	24.00	24.00
July	24.00	24.00	24.00	24.00
August	24.00	24.00	24.00	24.00
September	24.00	24.00	24.00	24.00
October	24.00	24.00	24.00	24.00
November	24.00	24.00	24.00	24.00
December	24.00	24.00	24.00	24.00
Year	24.00	24.00	24.00	24.00

Starch, Corn, Powdered

October 18, 1871, the price was $3 per 100 pounds; 1881, $2.85; 1891, $2.80; 1901, $1.88; 1911, $2.20; 1913, $2.24; 1919, September, $7.25.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.32	$3.07	$3.82	$3.67
February	3.57	3.32	3.82	3.82
March	3.72	3.57	3.82	3.82
April	4.12	3.82	3.82	3.82
May	4.12	4.12	3.82	3.82
June	4.22	4.12	3.82	3.82
July	4.22	4.22	3.82	3.82
August	4.22	4.07	3.82	3.82
September	4.07	4.07	3.92	3.82
October	4.07	4.07	3.92	3.82
November	4.07	4.07	3.92	3.92
December	4.07	4.07	3.92	3.82
Year	4.22	3.07	3.92	3.67

Starch, Potato

October 18, 1871, the price was 3¾c. per pound; 1881, 3¾c.; 1891, 3½c.; 1901, 3¾c.; 1911, 4c.; 1913, 5c.; 1918, April, 15½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05¾	$0.05¾	$0.05½	$0.05½
February	.05¾	.05¾	.05½	.05½
March	.05¾	.05¾	.05½	.05½
April	.05¾	.05¾	.05½	.05½
May	.05¾	.05¾	.05½	.05½
June	.05¾	.05¾	.05½	.05½
July	.05¾	.05¾	.05½	.05½
August	.05¾	.05¾	.05½	.05½
September	.05¾	.05¾	.05½	.05½
October	.05¾	.05¾	.05½	.05½
November	.05¾	.05¾	.05½	.05½
December	.05½	.05½	.05½	.05½
Year	.05¾	.05½	.05½	.05½

Sumac, Sicilian, Ground

October 18, 1871, the price was $110 per ton; 1881, $75; 1891, $65; 1901, $48; 1911, $51; 1913, $15; 1919, February, $150.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$62.00	$60.00	$75.00	$73.00
February	60.00	58.00	75.00	70.00
March	58.00	55.00	75.00	69.00
April	55.00	55.00	75.00	75.00
May	54.00	54.00	75.00	75.00
June	54.00	54.00	75.00	73.00
July	54.00	54.00	73.00	73.00
August	58.00	54.00	73.00	73.00
September	60.00	60.00	80.00	75.00
October	70.00	60.00	80.00	74.00
November	71.00	70.00	74.00	72.00
December	76.00	73.00	72.00	72.00
Year	76.00	54.00	80.00	69.00

Tapioca Flour

October 18, 1871, the price was 6c. per pound; 1881, 4¼c.; 1891, 4½c.; 1901, 3c.; 1911, 4¼c.; 1913, 3½c.; 1918, June, 18c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.03½	$0.03½	$0.03¾	$0.03¾
February	.03½	.03¾	.03¾	.03¾
March	.03¾	.03¾	.03¾	.03¾
April	.03¾	.03¾	.03¾	.03¾
May	.03¾	.03¾	.03¾	.03¾
June	.03¾	.03¾	.03¾	.03¾
July	.03¾	.03¾	.03¾	.03¾
August	.03¾	.03¾	.03¾	.03¾
September	.03¾	.03¾	.03¾	.03¾
October	.03¾	.03¾	.04¼	.03¾
November	.03¾	.03¾	.04¼	.04¼
December	.03¾	.03¾	.04¼	.04¼
Year	.03¾	.03¾	.04¼	.03¾

Tanning Materials

Fustic Extract, Solid

October 18, 1871, the price was 14½c. per pound; 1881, 11c.; 1891, 9½c.; 1901, 8¾c.; 1911, 8c.; 1913, 8c.; 1916, January, 55c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.14	$0.14	$0.14	$0.14
February	.14	.14	.14	.14
March	.14	.14	.14	.14
April	.14	.14	.14	.14
May	.14	.14	.14	.14
June	.14	.14	.14	.14
July	.14	.14	.14	.14
August	.14	.14	.14	.14
September	.14	.14	.14	.14
October	.14	.14	.14	.14
November	.14	.14	.14	.14
December	.14	.14	.14	.14
Year	.14	.14	.14	.14

Fustic Extract, Crystals

October 18, 1871, the price was 12½c. per pound; 1881, 11c.; 1891, 9½c.; 1901, 8c.; 1911, 8c.; 1913, 6c.; 1916, January, 60c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.18	$0.18	$0.18	$0.18
February	.18	.18	.18	.18
March	.18	.18	.18	.18
April	.18	.18	.18	.18
May	.18	.18	.18	.18
June	.18	.18	.18	.18
July	.18	.18	.18	.18
August	.18	.18	.18	.18
September	.18	.18	.18	.18
October	.18	.18	.18	.18
November	.18	.18	.18	.18
December	.18	.18	.18	.18
Year	.18	.18	.18	.18

Logwood Extract, Solid

October 18, 1871, the price was 9¼c. per pound; 1881, 8¼c.; 1891, 7¼c.; 1901, 8c.; 1911, 6c.; 1913, 6c.; 1916, January, 90c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08	$0.08	$0.12	$0.12
February	.12	.12	.12	.12
March	.12	.12	.12	.12
April	.12	.12	.12	.12
May	.12	.12	.12	.12
June	.12	.12	.12	.12
July	.12	.12	.12	.12
August	.12	.12	.12	.12
September	.12	.12	.12	.12
October	.12	.12	.12	.12
November	.12	.12	.12	.12
December	.12	.12	.12	.12
Year	.12	.08	.12	.12

Quebracho Extract, Solid

August 16, 1881, the price was 4¼c. per pound; October 18, 1891, 3½c.; 1901, 4¾c.; 1911, 4¾c.; 1913, 4¾c.; 1916, January, 20c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05	$0.05	$0.05¼	$0.05¼
February	.05¼	.05	.05¼	.05¼
March	.05¼	.05¼	.05¼	.05¼
April	.05¼	.05¼	.05¼	.05¼
May	.05¼	.05¼	.05¼	.05¼
June	.05¼	.05¼	.05¼	.05¼
July	.05¼	.05¼	.05¼	.05¼
August	.05¼	.05¼	.05¼	.05¼
September	.05¼	.05¼	.05¼	.05¼
October	.05¼	.05¼	.05	.05
November	.05¼	.05¼	.05	.05
December	.05¼	.05¼	.05	.05
Year	.05¼	.05	.05¼	.05

Quercitron, Solid

October 18, 1871, the price was 2c. per pound; 1881, 7c.; 1891, 6½c.; 1901, 3c.; 1911, 2¾c.; 1913, 2¾c.; 1916, January, 30c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09½	$0.09½	$0.09½	$0.09½
February	.09½	.09½	.09½	.09½
March	.09½	.09½	.09½	.09½
April	.09½	.09½	.09½	.09½
May	.09½	.09½	.09½	.09½
June	.09½	.09½	.09½	.09½
July	.09½	.09½	.09½	.09½
August	.09½	.09½	.09½	.09½
September	.09½	.09½	.09½	.09½
October	.09½	.09½	.09½	.09½
November	.09½	.09½	.09½	.09½
December	.09½	.09½	.09½	.09½
Year	.09½	.09½	.09½	.09½

Sumac Extract, Sicilian, Stainless

January 12, 1877, the price was 6c. per pound; October 18, 1881, 5¼c.; 1891, 6½c.; 1901, 7c.; 1911, 6¼c.; 1913, 8c.; 1919, May, 16c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.11	$0.11	$0.10	$0.10
February	.10	.10	.10	.10
March	.10	.10	.10	.10
April	.10	.10	.10	.10
May	.10	.10	.10	.10
June	.10	.10	.10	.10
July	.10	.10	.10	.10
August	.10	.10	.10	.10
September	.10	.10	.10	.10
October	.10	.10	.10	.10
November	.10	.10	.10	.10
December	.10	.10	.10	.10
Year	.11	.10	.10	.10

Coaltar Dye and Chemical Imports in 1929

Imports of coaltar dyes and chemicals, entered for consumption in the United States during 1929, compared month by month with 1928 as follows:—

Imports of Synthetic Dyes

	1929		1928	
	Pounds.	Invoice value.	Pounds.	Invoice value.
January	552,821	$432,505	415,156	$327,148
February	390,664	323,514	478,407	391,351
March	766,786	612,253	378,191	316,183
April	576,193	445,200	633,815	505,152
May	523,817	428,780	382,233	295,969
June	457,197	385,306	411,662	309,607
July	501,240	424,314	424,613	334,849
August	511,038	438,363	389,957	317,879
September	462,529	444,007	257,295	240,132
October	594,284	519,279	608,852	501,601
November	530,153	448,752	569,293	452,749
December	453,044	391,306	396,695	304,583
Totals	6,321,766	$5,293,579	5,346,169	$4,297,203

Imports of Medicinals, Photographic Developers, Intermediates, and Other Coaltar Products*

	1929		1928	
	Pounds.	Invoice value.	Pounds.	Invoice value.
January	150,458	$64,872	134,645	$41,886
February	169,529	47,559	185,663	54,962
March	270,750	87,163	215,581	56,809
April	571,019	94,074	178,502	109,283
May	562,628	66,725	92,699	44,876
June	899,355	104,891	92,407	57,406
July	286,837	203,016	105,827	68,229
August	234,021	95,570	58,188	42,544
September	293,114	51,892	133,212	39,038
October	200,519	74,595	210,570	90,434
November	479,740	157,962	239,662	71,487
December	57,058	35,314	128,710	58,262
Totals	4,175,028	$1,083,633	1,775,666	$735,216

* Not including synthetic aromatics.

Imports of Color Lakes

	1929	
	Pounds.	Invoice value.
January	875	$679
February	...	...
March	3,907	1,709
April	2,479	2,354
May	4,908	2,625
June	2,735	1,262
July	674	697
August	560	...
September	...	...
October	3,243	2,422
November	250	182
December	250	...
Totals	19,511	$12,604

Origin of Imported Dyes

	Percent	
	1929.	1928.
Germany	66.87	65.31
Switzerland	28.93	24.75
France	0.76	1.31
England	1.34	1.76
Belgium	0.86	2.47
Canada	0.73	2.48
Italy	0.31	1.40
Netherlands	0.20	0.52

Imports Left in Bond

	Pounds	
	Dyes and colors.	Intermediates.
June 30, 1929	1,158,617	2,120,889
July 31, 1929	1,013,225	2,026,258
August 31, 1929	932,120	1,968,837
September 30, 1929	895,316	1,999,347
October 31, 1929	795,756	2,081,241
November 30, 1929	867,781	2,198,240

Canadian Mineral Output Up in 1929

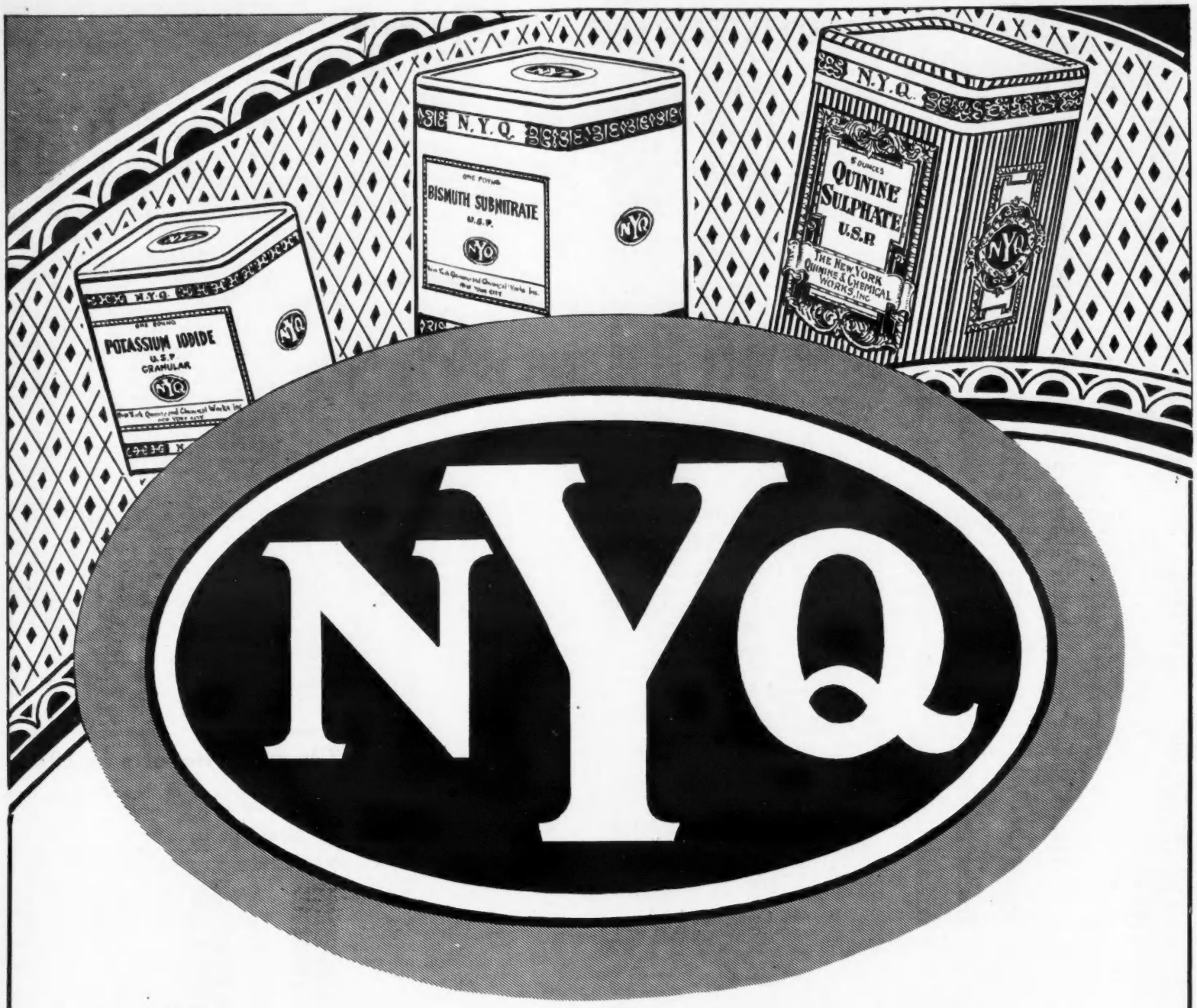
The total value of minerals produced in Canada in 1929 has been officially estimated at $303,876,000. This is an increase of more than 10 percent over 1928 and exceeds all previous records. Nineteen mineral products each had a production value of $1,000,000 or over. Particularly notable gains were registered in copper and nickel among the metals, and asbestos and cement among the nonmetals.

Metals produced had an aggregated value (estimated) of $151,327,900, including the following:—

	Pounds.	Value.
Nickel	109,200,000	$25,700,000
Copper	242,401,609	43,312,000
Lead	327,062,151	16,551,000
Zinc	204,621,300	11,009,000
Cobalt and platinum metals	...	2,248,000

Among the nonmetals, fuels had a total value of $76,116,000; other products, $21,205,000. This group included 1,132,800 barrels of crude petroleum, valued at $3,945,000; 24,514,200,000 cubic feet of natural gas, valued at $9,202,000; and the following:—

	Tons.	Value.
Asbestos	305,575	$13,337,000
Feldspar	35,000	325,000
Gypsum	1,256,000	3,666,000
Lime	534,826	4,878,000
Mica	4,000	120,000
Quartz	260,000	500,000
Salt	342,000	1,560,000
Talc and soapstone	...	225,000



Acetanilid	Morphine Sulphate	Thymol
Bismuth Subnitrate	Ethyl Morphine	Salicylates
Bismuth Subcarbonate	Iodoform	Strychnine
Cinchonine	Glycerophosphates	Bromide of Soda
Cinchona Alkaloids	Opium	Bromide of Potash
Cinchophen	Potassium Iodide	Bromide of Ammonia
Codeine Sulphate	Quinine Sulphate	Silver Salts
Codeine Phosphate	Quinidine	Menthol-Y (trade mark reg.)
Cinchonidine		Vanillin

In bulk for manufacturers and in packages for wholesale trade

The New York Quinine and Chemical Works

INCORPORATED

General Offices: 99-117 North Eleventh Street, New York--Borough of Brooklyn

St. Louis Depot, 304 South 4th St., St. Louis, Mo.

Drugs and Fine Chemicals: Market Review

Business in drugs and fine chemicals during 1929 was featured, mainly, by an exceptionly steady flow of orders from manufacturing consumers to the producers. The year lacked anything resembling the spectacular developments caused by the influenza outbreak in the previous year. Volume was good and in most of the articles a reasonable margin of profits was maintained throughout the entire year. If the year had any single and outstanding feature it was stability of prices. The rank and file of merchandise was kept to a firm basis of quotations throughout 1929, contributing thereby much of the confidence that most buyers seemed to have at all times. The undertone at the end of the year was one of firmness and steady strength despite the normal reduction in sales that came co-incident with the inventory period.

Comparative Values

Oil, Paint and Drug Reporter index numbers, based on 100 as the average price for thirty-five drugs and fine chemicals August 1, 1914, ranged as follows by quarters over 1927.—

Jan 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
183.5	183.2	182.9	197.7	197.8

Opium, and the group of narcotics derived from that article, proved to be one of the outstanding price features in the market. The early months in the year passed without important development save that the market was firm at all times due to the very heavy draft made on production because of the widespread influenza that began in 1928 and carried over the first quarter of 1929. In fact, for the first six months of the year stability was the keynote to both prices and consumption. Action started with the first week in July. During that week, one of the domestic manufacturers of narcotics received cable reports from Constantinople which declared that the Salonika crop of opium had turned out a virtual failure. Some time prior to that there had been reports of unsuccessful seeding of the crop but that report had been discounted as propaganda. As the event proved later on, the unsuccessful seeding had been a fact and was in no small degree responsible for the failure of the Salonika crop.

Opium Strong

By the middle of July it was known that the crop would not exceed 300 cases. Furthermore, it was also learned that other opium crops had been reduced by the unseasonably cold weather during the growing season. The total stock believed to be available, all sources included, was 2,300 cases. Confirmation of the shortage came parallel with severe advances in quotations from Smyrna and Constantinople. The rise was so sharp as to force an advance in the spot quotations for opium, morphine, and codeine. This rise in prices was duly noted in the Reporter for July 15. Opium was raised 90c. per pound, making the price $12.90 per pound in cases and $13.85 per pound for either powdered or granulated opium. Morphine sulphate was raised $1 per ounce, bringing the market to $8.75 per ounce and codeine sulphate was up $1.25 per ounce, establishing a market at $9.50 per ounce.

One feature of the situation was that the principal crop failure, that of the Macedonia, or Salonika, crop hit the manufacturing trades in a vulnerable spot—cost of production. These crops are always high in morphia content and are far more desirable than the opium from Smyrna, which is usually not in excess of 9 percent morphia.

With the supply of high test opium reduced to 300 cases, manufacturers were forced to turn to the lower test material and they were very prompt in declaring that they would have to be permitted an increase in their opium imports if the narcotic requirements of the nation were to be supplied. Such permission was granted by the government once it understood the situation. Importations for the first nine months illustrate the increase in importations. The total for that period in 1929 was 128,495 pounds as compared with 63,983 pounds arrived in the corresponding period in 1928.

The opium factors in the United States restricted their rises in prices to the one just noted. However, the rise in quotations in the primary markets extended for a considerable period of time and while it was felt that higher levels might come here, the event proved that the domestic manufacturers were seeking a stabilized price that would cover their increased cost of manufacture but eliminate from this market all element of speculation. They bought cautiously in the foreign markets, seeking not to disturb conditions at the primary source of supply. They were successful.

Alcohol Free from Speculation

Production of alcohol in 1929 was on an orderly basis overseen by the Prohibition Bureau acting under orders from the Treasury Department. So well had plans and policies been worked out that the market was kept entirely clear of anything smacking of speculation and unusual or unexpected changes in prices. Production gained over that in 1928. According to the latest figures provided in the report of the prohibition commissioner, the production of alcohol for the fiscal year ended June 30, with comparative figures for each year back to 1920, was as follows:—

Fiscal year.	Proof gallons.
1920	18,933,551.02
1921	85,068,776.33
1922	79,906,101.50
1923	122,402,849.81
1924	135,897,725.83
1925	166,105,517.81
1926	202,271,670.32
1927	184,323,016.97
1928	169,149,904.83
1929	200,832,051.08

Shortly after the beginning of 1930, a reduction of production, voluntary on the part of the distillers, was ordered by the Treasury Department, the curtailment being set at 15 percent, with the understanding that should consumption require it, output of the distilleries would be increased to cover requirements.

Pricewise, the alcohol market was a most orderly affair in 1929. Prices were quoted on the usual sliding scale adopted as a stabilizing factor operating through the Alcohol Institute, with which body distillers "published" their prices from time to time.

The price for completely denatured alcohol, formula No. 5, January 1, was 46c. per gallon in tanks. That price continued in effect until the distillers announced new prices for the season of 1929. This announcement came in the first week of May. The price for C. D. No. 5 was set at 47c. per gollon. June-July deliveries were quoted at 48c.; August, 49c.; and September to the end of the year, 50c. per gallon. This sliding scale of advancing prices was adhered to. No additional advances in quotations were made, a fact somewhat in contrast with the practices of some previous years when the distillers had made special advances in addition to those scheduled in their rising scale of quotations.

The cost of producing alcohol in 1929 was higher than in 1928. This was due to the prices paid for raw material. Both molasses and corn were high priced raw materials throughout 1929, and with the close of that year it became certain that the cost or production would be still higher in 1930. The cost of molasses for 1930 production was at least as high as 11c. per gallon, an exceptionally high figure. Therefore, higher prices for alcohol were forecast for the new year. When announced, the forecast was realized. They were named promptly at the turn of the year and provided a schedule of quotations from January to December, 1930.

During the year, further merging of alcohol companies took place. According to the report of the prohibition commissioner, there were fifty-two industrial alcohol plants in the United States as of June 30. Furthermore, there were seventy-five bonded warehouses handling alcohol and seventy-seven denaturing plants.

Withdrawals from denaturing plants by months during the fiscal year ended June 30, 1929, were as follows:—

	Gallons—Completely Denatured.	Gallons—Specially Denatured.
July (1928)	4,605,226.71	3,734,924.66
August	4,751,475.48	4,120,788.05
September	4,768,159.57	4,098,517.12
October	7,703,270.59	4,805,282.63
November	6,685,533.32	5,008,003.32
December	5,501,784.62	5,669,425.16
January (1929)	3,858,764.05	4,064,719.24
February	2,297,593.00	4,369,074.72
March	2,337,769.74	5,326,353.59
April	2,502,952.64	4,495,764.42
May	3,158,163.45	4,740,392.41
June	3,107,155.56	4,023,188.62
Totals	51,367,848.73	54,456,436.94

A view of the consumption of raw materials for manufacture of alsohol during the fiscal year 1928-1929 may be gained from the following tabulation:—

	Bushels.	Gallons.
Corn	9,801,852	
Rye	8,475	
Malt	358,658	
Other materials	10,891	
Molasses		268,044,822
Liquids containing one-half of one percent or more alcohol by volume		53,884,275
Totals	9,179,876	321,929,097

Synthetic Methanol Makes Market

The principal feaure in the market for methanol during 1930 was the tremendous expansion in the production of synthetic material. Long before the close of the year, two large plants were in production, vying with each other, as well as with the makers of natural methanol, to secure control of the market. For a time the price situation was fairly satisfactory, but ultimately it became clear that any open quotation for either synthetic or natural methanol was a nominal figure. Makers of synthetic methanol were frank in their determination to cut into the consumption field monopolized for years by the sellers of denatured alcohol. Furthermore, said makers also declared that, in their opinion, the price for methanol had been far too high; that the price had kept back a normal expansion in the consumption of the article. With that conviction in mind, they set out to put the price down to a basis where synthetic methanol could compete directly with the sale of denatured alcohol. By the close of the year, the producers of synthetic were pointing to the fact that the prices then being accepted by them were actually lower than the quotations for denatured alcohol, advocating that consumers, where possible, should turn to methanol.

An understanding of price movements during the year may be gained through a study of changes made in the tank schedule for 95 percent methanol. The quotation in January was 55c. per gallon, which quotation continued in effect until November, when 48c. was named. That price was still effective at the end of the year, but with the beginning of 1930 prices were reduced to 43c. The important fact to have in mind is this:—At all times during the year quotations on natural methanol were close to being nominal. Because of the uncertainty concerning what the makers of synthetic were going to do—the manufacturers of that article had been frank in declaring their belief that prices were too high, must come down, and action in that regard awaited only the complete organization of synthetic production. During the final quarter of the year production was running at high levels and the manufacturers confirmed their belief in lower prices by reducing schedules to a basis where the article became definitely competitive with denatured alcohol. They also began a policy of education whereby buyers of denatured should turn to methanol as a more profitable purchase.

Comparison of price movements in pure natural methanol and synthetic methanol, in tanks, also affords an enlightening picture of market developments during the year. Pure and synthetic were priced at 60c. per gallon in January and were so quoted at midyear. By the end of September synthetic was down to 53c., but the sellers of pure continued to quote a nominal position at 60c. At the end of the year both articles were down to 50c. and it subsequently came about that the spot price for them both was 45c. shortly after the turn of the year. Manufacturers of synthetic had a special schedule for buyers of 250,000 gallons or more per year in tanks on contract. The price consideration on such a contract was 43c. A contract calling for delivery of less than 250,000 gallons in tanks was priced at 44c.

The price for crude methanol in January was 35c. per gallon. It went to 40c. by midyear and was still 40c. at the end. With the turn of the year it was learned that crude was actually available at 30c. Denaturing grade started 1929 at 60c. and by July was selling for 65c. The close of the year was at 55c. Here again the turn of the year brought actual prices more into the open. The quotation became 45c.

All of this price data indicates:—(1) the nominal condition of prices most of the year; (2) the steady increase of competition from synthetic methanol; (3) and, finally, a clarifying of the nominal price situation early in the beginning of 1930.

Price movements in the New York market during the year began in January, when quotations were high at $39 and low at $38 per barrel. By the end of February the market was down to $31.50, thus indicating the influence of new fishing. The low for March was $28, a further indication of the extent to which shippers discounted the effect of increasing output of oil from the 1929 catch of fish. In May, the market was down to $27, which price continued in June. The low point of the year came in $26.50 being reached in July and remaining, the market for good quality oil until mid-December, when prices were lifted to $28, there to end the year.

Newfoundland oil was offered here in small quantities throughout the year. The price began at $42 per barrel, came down to $30 in the last quarter of the year, because of the $42 price having been so far out of line with that for Norwegian. With the turn of the year $32 per barrel was asked. It is therefore clear that sellers of Newfoundland oil had decided to compete with Norway on prices.

Codliver Oil Consumption Gains

Two features figured heavily in the market for codliver oil during the past year: First, the large production in Norway; second, the consumption of oil, which was sufficiently larger than in the previous year to cause one of the smallest carryovers in years to exist at the end of December, 1929. Coupled with this situation was a rather stable price position for the article once the effect of the increased production had been discounted. On the whole, the dealers in this article had a very satisfactory year. The increased use of U.S.P. oil as well as oil not so branded, in the poultry and feeding trades, accounted for the marked gain in world consumption.

Production of oil in Norway from 1922 to 1929 inclusive is shown in the following tabulation:—

	Fish.	Oil. Barrels of 30 gls.
1929	78,600,000	88,611
1928	63,200,000	43,955
1927	66,800,000	63,357
1926	89,100,000	106,439
1925	60,100,000	88,118
1924	69,900,000	101,451
1923	51,600,000	54,856
1922	47,900,000	69,795

Menthol Prices Drop

Price trend in the market for menthol during the past year was almost continuously downward. Barring a few times when upward reaction in values developed, buyers found the market fairly to their liking.

The quotations in January were high at $6 per pound and low at $5.60. The trend was a rising one throughout that month, being caused, mainly, by the fact that influenza throughout the country increased sharply the call for mentholized remedial agents. Importations in January totaled 24,540 pounds, being composed of both natural and synthetic menthol. In fact, the figures issued by the Department of Commerce fail to separate synthetic from natural menthol, a condition which many interested in the article would not be sorry to have displaced by separate statistics such as are now provided in the camphor market.

February caught the market at the top for the year—$6 per pound. Declines set in as the month progressed and by the close quotations were down to $5.75 per pound. Importations in February totaled 31,190 pounds. Demand during the month tapered off somewhat as the manufacturers found their requirements well protected by goods purchased on contract.

March found prices still declining. Beginning at $5.75 the reductions were progressive until $5.35 per pound prevailed at the end of the period. Competition was very keen. Local demand was poor and holders were rather anxious sellers at all times. Importations totaled 36,121 pounds.

April declines in prices were steady but narrower. The drop amounted to 10c. maximum, though at the close of the month quotations showed a net loss of but 5c. The month began at $5.30 and in the third week was down 10c., only to have values recover 5c. later on. Demand was still on the conservative side, but the market was apparently more stable and less pressure to sell was noted. Imports totaled 15,422 pounds.

May business was small and the market was quite dull. Quotations were $5.25 per pound for the greater part of the month, but were reduced to $5.20 per pound as the month passed out. Imports totaled 11,152 pounds. Stocks were not excessive, but were far in excess of needs at that time.

June found the market in the doldrums. Movement was very narrow and buyers were apparently without the least interest save in jobbing quantities easily obtainable out of local stocks. Quotations held to the basis of $5 per pound throughout the month, but it was believed that shading of that figure occurred from time to time under conditions developed by transactions put through at private terms. Imports totaled 22,299 pounds.

July price trend was somewhat irregular. Starting at $5 per pound, the market rose to $5.25 and then declined to $5.15 after two weeks. The last quotation for the period was $5 per pound, values therefore showing no net change on the period. Imports totaled 18,075 pounds.

August came, and with it a resumption of the steady decline in prices that had featured the market early in the year. Beginning at $5, the market was down to $4.85 per pound by the last day of the month and to all intents and purposes the future seemed to be destined to develop further recessions. Imports totaled 16,060 pounds.

September brought sales at $4.50 per

The Baker Castor Oil Co.

BAKER'S

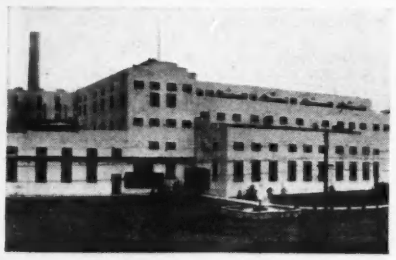
CRYSTAL
Odorless and Tasteless
A. A.
No. 3

CASTOR OIL

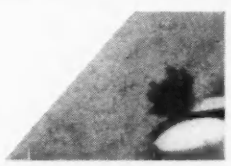
Largest Producers of Castor Oil in the United States

120 BROADWAY NEW YORK

ESTABLISHED 1857



U. S. Industrial Alcohol Co. plant at Curtis Bay, South Baltimore, Md.



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TO USERS OF INDUSTRIAL ALCOHOL — SPECIALLY AND COMPLETELY DENATURED . . . ALCOHOL SOLVENTS AND CHEMICALS

HERE is a corps of plants perculiarly adapted to meet your needs quickly and efficiently. Regardless of your location or your demands, U. S. Industrial Alcohol products are at your beck and call. Immediate deliveries can be made from eight handy factories direct, or through any one of the 23 factory branches.

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U. S. INDUSTRIAL ALCOHOL CO.
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110 East 42nd St., New York
Makers of the famous Pyro Anti-freeze

Airplane view of U. S. Industrial Alcohol Co. Plan tat Peoria, Ill.

pound and not a great many of them, owing to the highly conservative call for spot goods. Some fair business was done in futures for arrival late in the year, but that failed to aid the weakened and declining situation on the spot. The decline in this month amounted to 35c. per pound. Imports totaled 17,100 pounds.

October witnessed a 10c. rise in prices, business being done at $4.50 and then at $4.60 per pound, the latter figure prevailing for three weeks of the month. A slight gain in demand was noted and accounted for the rise in prices. In point of fact, it was said that no one dealer held much of a supply, though the total of all holdings made a respectable figure. Imports totaled 33,000 pounds.

November and December were months of unchanged prices at $4.50 per pound but quoted only on the understanding that most of the time the figure was nominal, and that shading was more the rule than otherwise. News concerning quantities bought for arrival in January were rather large. Here again the quantities of the individual dealer were rather small, but owing to the fact that the number of dealers was rather large, the total of holdings was such as to make for unsettlement of prices and probable declines. Imports in November totaled 35,420 pounds. December figures were not available.

Conditions on spot seemed to contrast somewhat with those in the primary market at the end of the year. It seemed that New York prices would soon be lower than those in the replacement market. This was due solely to the competition current to a degree making for unsettlement and uncertainty as to the actual price at which a given buyer could purchase. It may be therefore seen that the year ended as it began—it ended in a buyers' market that was under the depression caused by excessive competition, too many holders, and a supply somewhat in excess of actual needs.

Week-to-week prices quoted in the Reporter as of the dates indicated were as follows:—

January	7	$5.60
"	14	5.85
"	21	5.90
"	28	6.00
February	4	6.00
"	11	6.00
"	18	5.80
"	25	5.75
March	4	5.75
"	11	5.50
"	18	5.40
"	25	5.35
April	1	5.30
"	8	5.25
"	15	5.20
"	22	5.25
"	29	5.25
May	6	5.25
"	13	5.25
"	20	5.25
"	27	5.20
June	3	5.00
"	10	5.00
"	17	5.00
"	24	5.00
July	1	5.00
"	8	5.25
"	15	5.25
"	22	5.15
"	29	5.00
August	5	5.00
"	12	5.00
"	19	4.90
"	26	4.85
September	2	4.85
"	9	4.85
"	16	4.75
"	23	4.75
"	30	4.50
October	7	4.50
"	14	4.60
"	21	4.60
"	28	4.60
November	4	4.50
"	11	4.50
"	18	4.50
"	25	4.50
December	2	4.50
"	9	4.50
"	16	4.50
"	23	4.50
"	30	4.50

Quinine Quiet

Barring the very heavy consumption of the article that began late in 1928 and continued into the first quarter of 1929, owing to widespread influenza, this year in quinine was a rather quiet affair. It that respect it was in direct contrast to its position in the previous year when court action led finally to the entry of a consent decree in which foreign manufacturers agreed to abandon certain practices that had run contrary to the anti-trust laws of this country.

The price for quinine sulphate was 40c. per ounce throughout the year. It was rather generally maintained, though from time to time news of orders at 39c. being accepted by responsible brokers was noted and confirmed. In point of fact, which the market was a quiet one from the standpoint of prices, it was an important one from other points of view.

Large consumers of quinine discovered that under the manner in which foreign makers of quinine had reorganized their business so as to conform with the Sherman and Clayton Acts, they were paying a higher average of price than they had paid for a number of years, when the Japanese and Swiss makers offered some competition to the Dutch producers. The system of special discounts was discontinued. All sales of quinine to this country—whether to the former agents of the Dutch, Japanese, or Swiss makers, or to large manufacturing consumers direct—were made through a sales organization set up to handle business with the United States. This sales agency was known as Buramic. The actual invoices paid by the large buyers in this country were consistently higher than in many a previous year. This gave rise to some rather bitter comment anent the net result of the Government of the United States having compelled the Dutch operators to come within the laws of this country. Outside of this situation the year held little of special moment. Consumption was larger, the total importations for eleven months of the year being 2,138,678 ounces as compared with 1,488,848 ounces during the corresponding period in 1928. The importations of all other cinchona bark derivatives was 1,202,828 ounces, compared with 806,858 ounces in the eleven months, 1928.

Mercurial Prices Stabilized

Prices for all mercurials were stabilized at unchanged prices throughout the year. This was the second year in which no change in quotations had been made. To a very considerable extent, the stability in prices was attributable to the successful working out of sales policy and production control on the part of the Spanish and Italian producers. The international sales office establishment at Lausanne, Switzerland, under the name Mercurio-Europeo, managed to eliminate most price fluctuations of wide and disorganizing character. At times toward the end of the year domestic metal came into the market at prices slightly under those for the Italian-Spanish article, but the quantities so available were hardly sufficient to make a market. Quotations on the spot for good-sized quantities were high at $125 per flask and low as $120. The low prices for the year prevailed in January and February. The high of $125 was reached in August. For the greater part of the time the market was between $123.50 and $124.50 per flask. In March, April and May, $123.50 was quoted. In June a decline to $121 was noted, that figure carrying throughout July, too. The rise in August was from $121 to the position of $125 per flask. The market closed the year at $124. For a presentation of prices for various mercurials, consult the comparative price tables below.

Miscellaneous Developments

Numerous developments in a miscellaneous collection of materials were noted. Acetphenetidin was stabilized at $1.20 per pound throughout the year, but competition was an important factor at all times. Borax held at 2¾c. per pound for powdered in barrels from January through October. In November, by a change in quotations to a ton basis and some readjustments, powdered goods were established at a price equivalent to 3 1/3c. per pound.

Chloral hydrate went through a somewhat checkered career. Increased sale of imported goods caused domestic manufacturers to cut prices in April from 75c. per pound to 58c. By September the competition of foreign had been put so well under control as to permit the domestic interest to put prices up to the basis of 70c., at which figure it ruled to the end of the year.

Chloroform underwent a single price change during the year. From January through May, U.S.P. goods were priced at 30c. per pound. In June, the quotation was reduced to 27c. per pound, thus meeting the competition that had quietly undermined the rather stable price position that most makers had maintained throughout 1928 and for almost half of 1929.

Sales of corn syrup were very heavy throughout the year. The opening price was $4.11. A decline put quotations to the basis of $3.91 per 100 pounds from the middle of January until September when they were raised to $4.01 per 100 pounds. This was at a time when the prices for raw material were advancing strongly to very high position. In December a decline was noted, the market being re-established at $3.91.

Formaldehyde felt the influence of the competition in the natural any syuthetic methanol market severely. Due to the successful production of formaldehyde from synthetic methanol at a declining cost to the producers, prices for formaldehyde were reduced from 9½c. per pound that prevailed from January into August, to the basis of 8½c., which quotation was set in August and continued to the end of the year. These quotations were largely nominal in that it was learned that the producers kept an open market schedule which served as window dressing to a considerable extent. Their actual selling prices to large buyers was consistently less than the figure quoted officially as the market. A further decline came with the turn of the year.

Soda benzoate underwent another revision of prices, due to prevailing conditions of competition. The quotation in January was 50c. and while some February business was done at that figure, a decline to 45c. was announced before the end of that month. The price remained unchanged for the balance of the year. It was understood that in point of volume the year had been of satisfactory proportions.

Development in prices for vanillin were lacking. The market remained at $6.25 per pound throughout the year for material made from clove oil. However, during the year some dealers obtained stocks of European vanillin made from guaiacol and were able to offer as low as $5 per pound. Late in the year one of the largest domestic makers of clove oil vanillin came into the market with an article made from guaiacol. He continued to offer clove oil vanillin. The price for this domestic product from guaiacol was $6 per pound.

Competition in strychnine was keen at all times, foreign goods finding a market here at prices which forced domestic producers to be content with a low measure of profits. They quoted alkaloid crystals at 66c. from January until November, when quotations were reduced to 61c., despite the fact that the cost of production, so far as prices paid for raw material were concerned, was no lower. In fact, the prices at which nux vomica was bought throughout the year were appreciably higher than they had been in 1928.

The end of the year found the market a rather quiet affair. Due to business depression that followed the collapse of inflated security prices on the New York and other stock exchanges, a definite decrease in volume was noted. However, seasonable items came in for an active sales campaign which produced some excellent results. Acetanilid, acetylsalicylic acid, quinine, camphor monobromide, codeine, and such materials gained a prominent position by the close of the year.

As to the future, most factors were inclined to take a sane, healthy, yet conservative view of business probable during the first quarter of the year. Satisfactory recovery was looked for during the second and succeeding quarters.

Drugs, Fine Chemicals: Record of Prices

For convenience, the divisions of the mercurial and opium groups are arranged alphabetically under "Mercury" and "Opium," respectively

Acetanilide

In August, 1891, the price was 54c. to 56c.; October 17, 1891, 52c.; 1901, 10c. to 21c.; 1911, 20½c. to 23c.; 1913, 21c. to 22c.; 1918, 80c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.30	$0.28	$0.36	$0.36
February	.28	.26	.36	.36
March	.26	.26	.36	.36
April	.36	.26	.36	.36
May	.36	.36	.36	.36
June	.36	.36	.36	.36
July	.36	.36	.36	.36
August	.36	.36	.36	.36
September	.36	.36	.36	.36
October	.36	.36	.36	.36
November	.36	.36	.36	.36
December	.36	.36	.36	.36
Year	.36	.26	.36	.36

November 14, 1910, the price was 80c. to 85c.; October 17, 1911, 82½c. to 85c.; 1913, 84c. to 85c.; 1917, February, $25.

Acetphenetidin

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.40	$1.40	$1.20	$1.20
February	1.40	1.40	1.20	1.20
March	1.40	1.40	1.20	1.20
April	1.40	1.40	1.20	1.20
May	1.40	1.40	1.20	1.20
June	1.40	1.40	1.20	1.20
July	1.40	1.40	1.20	1.20
August	1.40	1.40	1.20	1.20
September	1.40	1.40	1.20	1.20
October	1.40	1.20	1.20	1.20
November	1.20	1.20	1.20	1.20
December	1.20	1.20	1.20	1.20
Year	1.40	1.20	1.20	1.20

Alcohol

October 18, 1871, the price of ethyl was $1.87½ to $1.90; 1881, ethyl, $2.18 to $2.20; 1891, $2.30 to $2.32; 1901, ethyl, $2.51 to $2.53; wood, 95 percent, 60c.; 1911, ethyl, $2.56 to $2.58; methyl, 95 percent, 50c. to 52c.; denatured, 40c. to 42c.; 1913, ethyl, $2.50 to $2.52; methyl, 46c. to 47c.; denatured, 35c. to 38c.; ethyl, 1917, October, $3.60; methyl, 1920, $3.25; denatured, 1920, May, $1.11.

1928

	Per gallon					
	Barrels. Ethyl 188 proof.		Tanks. Methanol 95%		Tanks. Denatured No. 5.	
	H.	L.	H.	L.	H.	L.
Jan.	$2.70½	$2.70½	$0.45	$0.45	$0.46	$0.46
Feb.	2.70½	2.70½	.43	.40	.46	.46
Mar.	2.70½	2.65½	.43	.43	.46	.41
April	2.65½	2.65½	.43	.43	.41	.41
May	2.66½	2.65½	.43	.43	.42	.41
June	2.67½	2.60½	.43	.43	.42	.42
July	2.67½	2.67½	.45	.44	.43	.43
Aug.	2.68½	2.68½	.45	.45	.44	.44
Sept.	2.69½	2.64	.45	.45	.45	.45
Oct.	2.67	2.66	.55	.45	.46	.45
Nov.	2.67	2.67	.55	.55	.46	.46
Dec.	2.67	2.67	.55	.55	.46	.46
Year	2.70½	2.64	.55	.40	.46	.41

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	Barrels, Ethyl 188 proof.		Tanks, Methanol 95%		Tanks, Denatured No. 5.	
	H.	L.	H.	L.	H.	L.
Jan.	$2.67	$2.67	$0.55	$0.55	$0.46	$0.46
Feb.	2.67	2.67	.55	.55	.46	.46
March	2.67	2.67	.55	.55	.46	.46
Apr.	2.67	2.67	.55	.55	.46	.46
May	2.67	2.67	.55	.55	.47	.47
June	2.67	2.67	.55	.55	.48	.48
July	2.67	2.67	.55	.55	.48	.48
Aug.	2.65	2.65	.55	.55	.49	.49
Sept.	2.66	2.66	.55	.55	.50	.50
Oct.	2.66	2.66	.55	.55	.50	.50
Nov.	2.66	2.66	.55	.48	.50	.50
Dec.	2.66	2.66	.48	.48	.50	.50
Year	2.67	2.65	.55	.48	.50	.46

Twenty-five Years' Prices: Methanol 95%

	Per gallon H.	L.
1929	$0.55	$0.48
1928	.55	.40
1927	.80	.45
1926	.80	.58
1925	.68	.68
1924	.88	.68
1923	1.13	.88
1922	1.13	.50
1921	1.65	.57
1920	3.25	1.52
1919	1.35	.90½
1918	1.52	1.17
1917	1.35	.90
1916	.90	.55
1915	.55	.45
1914	.45	.45
1913	.50	.45
1912	.50	.49
1911	.50	.50
1910	.50	.50
1909	.50	.50
1908	.51	.39
1907	.40	.40
1906	.70	.40
1905	.70	.60

Acetylsalicylic Acid, Powdered (Aspirin)

March 10, 1917, the price was $3.50.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.85	$0.85	$0.85	$0.85
February	.85	.85	.85	.85
March	.85	.85	.85	.85
April	.85	.85	.85	.85
May	.85	.85	.85	.85
June	.85	.85	.85	.85
July	.85	.85	.85	.85
August	.85	.85	.85	.85
September	.85	.85	.85	.85
October	.85	.85	.85	.85
November	.85	.85	.85	.85
December	.85	.85	.85	.85
Year	.85	.85	.85	.85

Bismuth Subnitrate, Powdered

May 6, 1875, the price was $2; October 18, 1881, $1.85; 1891, $1.90; 1901, $1.40 to $1.45; 1911, $1.80 to $1.85; 1913, $1.80 to $1.85; 1918, April, $6.20.

	1928. Per pound H.	L.	1929. H.	L.
January	$2.05	$2.05	$1.60	$1.60
February	2.30	2.30	1.60	1.60
March	2.30	2.30	1.60	1.60
April	2.30	2.30	1.60	1.60
May	2.30	2.30	1.60	1.60
June	2.30	2.30	1.60	1.60
July	2.30	2.05	1.60	1.60
August	2.05	2.05	1.60	1.60
September	2.05	2.05	1.60	1.60
October	2.05	1.80	1.60	1.60
November	1.80	1.60	1.60	1.60
December	1.60	1.60	1.60	1.60
Year	2.30	1.60	1.60	1.60

Borax, Powdered

On October 18, 1871, the price was 32c. to 33c.; 1881, 12½c. to 13¼c.; 1891, 8¾c. to 8¾c.; 1901, 7¼c. to 7½c.; 1911, 3½c. to 3¾c.; 1913, 3¾c. to 4c.; 1920, January, 8½c.

1928

	Sacks. Per pound H.	L.	Barrels. H.	L.
January	$0.03¾	$0.03¾	$0.04	$0.04
February	.03¾	.03¾	.04	.04
March	.03¾	.03¾	.04	.04
April	.03¾	.03¾	.04	.04
May	.03¾	.03¾	.04	.04
June	.03¾	.02½	.04	.03½
July	.02½	.02½	.03½	.02¾
August	.02½	.02½	.02¾	.02¾
September	.02½	.02½	.02¾	.02¾
October	.02½	.02½	.02¾	.02¾
November	.02½	.02½	.02¾	.02½
December	.02½	.02½	.02¾	.02¾
Year	.03¾	.02½	.04	.02¾

1929

	Sacks. Per pound H.	L.	Barrels. H.	L.
January	$0.02½	$0.02½	$0.02¾	$0.02¾
February	.02½	.02½	.02¾	.02¾
March	.02½	.02½	.02¾	.02¾
April	.02½	.02½	.02¾	.02¾
May	.02½	.02½	.02¾	.02¾
June	.02½	.02½	.02¾	.02¾
July	.02½	.02½	.02¾	.02¾
August	.02½	.02½	.02¾	.02¾
September	.02½	.02½	.02¾	.02¾
October	.02½	.02½	.02¾	.02¾
November	.02⅞	.02⅞	.03⅛	.03⅛
December	.02⅞	.02⅞	.03⅛	.03⅛
Year	.02⅞	.02½	.03⅛	.02¾

Bromides

June 5, 1872, the price of ammonium was $1.90 to $1.95; potassium, May 29, 1872, $1.20 to $1.30; sodium, $3.50 to $3.60; October 18, 1881, ammonium, 42c.; potassium, 29c. to 30c.; sodium, 42c.; 1891, ammonium, 36c.; potassium, 24c. to 26c.; sodium, 36c.; 1901, ammonium, 55c.; potassium, 46c. to 47c.; sodium, 51c.; 1911, ammonium, 41c. to 42c.; potassium, 31c. to 34c.; sodium, 37c. to 38c.; 1913, ammonium, 49c. to 50c.; potassium, 39c. to 40c.; sodium, 45c. to 46c.; ammonium, 1917, January, $1; potassium, 1917, November, $1.45; sodium, 1920, June, 85c.

1928

	Ammonia. Per pound, granular H.	L.	Potash. H.	L.	Soda. H.	L.
January	$0.48	$0.48	$0.42	$0.42	$0.42	$0.42
February	.48	.48	.42	.42	.42	.42
March	.48	.48	.42	.42	.42	.42
April	.48	.48	.42	.42	.42	.42
May	.48	.48	.42	.42	.42	.42
June	.48	.48	.42	.42	.42	.42
July	.47½	.47	.42	.42	.42	.42
August	.47	.47	.42	.42	.42	.42
September	.47	.47	.42	.42	.42	.42
October	.47	.47	.42	.42	.42	.42
November	.47	.47	.42	.42	.42	.42
December	.47	.47	.42	.42	.42	.42
Year	.48	.47	.42	.42	.42	.42

1929

	Ammonia. Per pound, granular H.	L.	Potash. H.	L.	Soda. H.	L.
January	$0.47	$0.47	$0.42	$0.42	$0.42	$0.42
February	.48	.48	.42	.42	.42	.42
March	.48	.48	.42	.42	.42	.42
April	.48	.48	.42	.42	.42	.42
May	.48	.48	.42	.42	.42	.42
June	.48	.48	.42	.42	.42	.42
July	.48	.48	.42	.42	.42	.42
August	.48	.48	.42	.42	.42	.42
September	.48	.48	.42	.42	.42	.42
October	.48	.48	.42	.42	.42	.42
November	.48	.48	.42	.42	.42	.42
December	.48	.48	.42	.42	.42	.42
Year	.48	.48	.42	.42	.42	.42

Camphor, Monobromated

November 4, 1907, the price was $1.40 to $1.50; October 18, 1911, 95c. to $1.05; 1913, $1 to $1.10; 1919, December, $5.

	1928. Per pound H.	L.	1929. H.	L.
January	$1.85	$1.85	$1.85	$1.85
February	1.85	1.85	1.85	1.85
March	1.85	1.85	1.85	1.85
April	1.85	1.85	1.85	1.85
May	1.85	1.85	1.85	1.85
June	1.85	1.85	1.85	1.85
July	1.85	1.85	1.85	1.85
August	1.85	1.85	1.85	1.85
September	1.85	1.85	1.85	1.85
October	1.85	1.85	1.85	1.85
November	1.85	1.85	1.85	1.85
December	1.85	1.85	1.85	1.85
Year	1.85	1.85	1.85	1.85

Caffeine, Alkaloid

August 20, 1894, the price was $3 to $3.10; October 18, 1901, $3.75 to $4; 1911, $3.15 to $3.25; 1913, $3.40 to $3.50; 1918, April, $13.50.

	1928. Per ounce H.	L.	1929. H.	L.
January	$3.05	$2.90	$2.80	$2.80
February	2.90	2.90	2.80	2.80
March	2.90	2.90	2.80	2.80
April	2.90	2.90	2.80	2.80
May	2.90	2.90	2.80	2.80
June	2.90	2.80	2.80	2.80
July	2.80	2.80	2.80	2.80
August	2.80	2.80	2.80	2.75
September	2.80	2.80	2.75	2.75
October	2.80	2.80	2.75	2.75
November	2.80	2.80	2.75	2.75
December	2.80	2.80	2.75	2.75
Year	3.05	2.80	2.80	2.75

Cantharides, Chinese

October, 1871, the price was $1.60; 1881, 90c. to 95c.; 1891, 95c.; 1901, 61c. to 65c.; 1911, 18c. to 20c.; 1913, 45c. to 50c.; 1920, January, $1.40.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.60	$0.60	$0.50	$0.50
February	.60	.60	.50	.50
March	.60	.60	.50	.50
April	.60	.60	.45	.45
May	.60	.45	.45	.42
June	.50	.50	.42	.42
July	.50	.50	.42	.42
August	.50	.50	.42	.42
September	.50	.50	.42	.42
October	.50	.50	.42	.42
November	.50	.50	.42	.42
December	.50	.50	.42	.42
Year	.60	.45	.50	.42

Castor Oil, Medicinal

October 18, 1871, the price was 18c. to 19c.; 1881, 14½c.; 1891, 12c.; 1901, 12c.; 1911, 10½c.; 1913, 9¾c. to 9½c.; 1918, August, 30c.

	1928. Per pound Drums. H.	L.	1929. Drums. H.	L.
January	$0.13½	$0.13½	$0.13	$0.13
February	.13½	.13½	.13½	.13
March	.13½	.13½	.13½	.13½
April	.13½	.13½	.13½	.13½
May	.13½	.13½	.13½	.13½
June	.13½	.13½	.13½	.13
July	.13½	.13	.13	.13
August	.13	.13	.13	.13
September	.12½	.12½	.13	.13
October	.13	.13	.13	.13
November	.13	.13	.13	.13
December	.13	.13	.13	.13
Year	.13½	.12½	.13½	.13

Chloral Hydrate

February 25, 1874, the price was $1.90; October 18, 1881, $1.35 to $1.80; 1891, $1.05 to $1.15; 1901, 95c. to $1; 1911, 74c. to 76c.; 1913, 61c. to 64c.; 1918, April, $2.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.75	$0.75	$0.75	$0.75
February	.75	.75	.75	.75
March	.75	.75	.75	.75
April	.75	.75	.75	.58
May	.75	.75	.58	.58
June	.75	.75	.58	.58
July	.75	.75	.58	.58
August	.75	.75	.58	.58
September	.75	.75	.70	.58
October	.75	.75	.70	.70
November	.75	.75	.70	.70
December	.75	.75	.70	.70
Year	.75	.75	.75	.58

Chloroform, U.S.P.

February 25, 1874, the price was $1.05; October 18, 1881, 65c.; 1891, 50c. to 55c.; 1901, 45c. to 55c.; 1911, 25c. to 33c.; 1913, 25c. to 30c.; 1917, November, 70c.

	1928. Per pound H.	L.	1929 H.	L.
January	$0.30	$0.30	$0.30	$0.30
February	.30	.30	.30	.30
March	.30	.30	.30	.30
April	.30	.30	.30	.30
May	.30	.30	.30	.30
June	.30	.30	.27	.27
July	.30	.30	.27	.27
August	.30	.30	.27	.27
September	.30	.30	.27	.27
October	.30	.30	.27	.27
November	.30	.30	.27	.27
December	.30	.30	.27	.27
Year	.30	.30	.30	.27

Citrate, Potash

May 29, 1879, the price was $1 to $1.05; October 18, 1881, 60c.; 1891, 50c.; 1901, 33c.; 1911, 38c.; 1913, 48c.; 1919, January, $2.02.

	1928. Per pound H.	L.	1929 H.	L.
January	$0.53	$0.53	$0.53	$0.53
February	.53	.51	.53	.53
March	.51	.51	.53	.53
April	.51	.51	.53	.53
May	.51	.51	.53	.53
June	.51	.51	.53	.53
July	.51	.51	.53	.53
August	.51	.51	.53	.53
September	.51	.51	.53	.53
October	.51	.51	.53	.53
November	.51	.51	.53	.53
December	.51	.51	.53	.53
Year	.53	.51	.53	.53

Cocaine Hydrochloride, Granular

August 10, 1891, the price was $6.50 to $7; October 18, 1901, $5.50 to $5.55; 1911, $3.25 to $3.55; 1913, $3.35 to $3.60; 1918, June, $11.25.

	1928. Per pound H.	L.	1929. H.	L.
January	$8.50	$8.50	$8.50	$8.50
February	8.50	2.50	8.50	8.50
March	8.50	8.50	8.50	8.50
April	8.50	8.50	8.50	8.50
May	8.50	8.50	8.50	8.50
June	8.50	8.50	8.50	8.50
July	8.50	8.50	8.50	8.50
August	8.50	8.50	8.50	8.50
September	8.50	8.50	8.50	8.50
October	8.50	8.50	8.50	8.50
November	8.50	8.50	8.50	8.50
December	8.50	8.50	8.50	8.50
Year	8.50	8.50	8.50	8.50

Cocoa Butter

April 2, 1879, the price was 37½c.; October 8, 1881, 50c.; 1891, 32c. to 42c.; 1901, 34½c. to 35½c.; 1911, 45c. to 48c.; 1913, 36c. to 39c.; bulk, 1919, March, 52c.; fingers, 1919, September, 52c.

1928

	Bulk. Per pound H.	L.	Wrapped fingers in 12-lb. boxes. H.	L.
January	$0.40	$0.40	$0.48	$0.46
February	.40	.33½	.46	.46
March	.33½	.33½	.46	.46
April	.33½	.33½	.46	.42
May	.36	.33½	.42½	.42
June	.36	.33¼	.43	.42½
July	.33¼	.33¼	.43	.43
August	.33¼	.33¼	.43	.43
September	.29½	.29½	.40	.40
October	.29½	.29½	.40	.40
November	.29½	.29½	.40	.40
December	.29½	.29½	.40	.40
Year	.40	.29½	.48	.40

1929

	Bulk. Per pound H.	L.	Wrapped fingers in 12-lb. boxes. H.	L.
January	$0.32	$0.32	$0.42	$0.42
February	.32	.32	.42	.42
March	.32	.32	.42	.42
April	.32	.32	.42	.42
May	.32	.30	.42	.40
June	.30	.30	.40	.40
July	.30	.30	.40	.40
August	.30	.30	.40	.40
September	.30	.30	.40	.40
October	.30	.30	.40	.40
November	.30	.30	.40	.40
December	.30	.30	.40	.40
Year	.32	.30	.42	.40

Codliver Oil, Norwegian

In September, 1872, the price was $60; October 18, 1881, $36 to $45; 1891, $23.50 to $32; 1901, $21.50 to $25; 1911, $35 to $37; 1913, $24.50 to $25; 1916, April, $150.

	1928. Per barrel H.	L.	1929. H.	L.
January	$36.00	$36.00	$39.00	$38.00
February	36.00	36.00	38.00	31.50
March	43.00	36.00	31.50	28.00
April	44.00	43.00	30.00	29.00
May	44.00	44.00	29.00	27.00
June	42.00	40.00	27.00	27.00
July	42.00	42.00	27.00	26.50
August	42.00	42.00	26.50	26.50
September	42.00	42.00	26.50	26.50
October	42.00	40.00	26.50	26.50
November	40.00	38.00	26.50	26.50
December	40.00	39.00	28.00	26.50
Year	44.00	36.00	39.00	26.50

Corn Syrup, 42 Degrees

February 25, 1874, the price was $9; October 18, 1881, $4 to $4.75; 1891, $2.90 to $3.25; 1901, $1.65; 1911, $2.33; 1913, $2.31; 1917, August, $6.39.

	1928. Per 100 pounds H.	L.	1929. H.	L.
January	$3.41	$3.16	$4.11	$3.91
February	3.66	3.41	3.91	3.91
March	3.81	3.66	3.91	3.91
April	4.21	3.91	3.91	3.91
May	4.21	4.21	3.91	3.91
June	4.26	4.21	3.91	3.91
July	4.26	4.26	3.91	3.91
August	4.26	4.11	3.91	3.91
September	4.11	4.11	4.01	3.91
October	4.11	4.11	4.01	4.01
November	4.11	4.11	4.01	4.01
December	4.11	4.11	4.01	3.91
Year	4.26	3.16	4.11	3.91

Coumarin

August 20, 1894, the price was $17 to $25; October 18, 1901, $4.40 to $4.50; 1911, $3.10 to $3.25; 1913, $3.10 to $3.24; 1918, June, $32.

	1928. Per pound H.	L.	1929. H.	L.
January	$3.60	$3.60	$3.60	$3.60
February	3.60	3.60	3.60	3.60
March	3.60	3.60	3.60	3.60
April	3.60	3.60	3.60	3.60
May	3.60	3.60	3.60	3.60
June	3.60	3.60	3.60	3.60
July	3.60	3.60	3.60	3.60
August	3.60	3.60	3.60	3.60
September	3.60	3.60	3.60	3.60
October	3.60	3.60	3.60	3.60
November	3.60	3.60	3.60	3.60
December	3.60	3.60	3.60	3.60
Year	3.60	3.60	3.60	3.60

Cream of Tartar, Powder

October 18, 1871, the price was 30½c.; 1881, 32c. to 33c.; 1891, 23c. to 23½c.; 1901, 9c. to 9¾c.; 1911, 23¾c. to 24c.; 1913, 24¾c. to 25c.; 1918, July, 68½c.

	1928. Per pound—Barrels. H.	L.	1929. H.	L.
January	$0.26¾	$0.26¾	$0.27¾	$0.27¾
February	.26¾	.26¾	.27¾	.27¾
March	.26¾	.26¾	.27¾	.27¾
April	.26¾	.26¾	.27¾	.26¾
May	.26¾	.26¾	.26¼	.26¼
June	.26¾	.26¾	.26¼	.26¼
July	.26¾	.26¾	.26¼	.26¼
August	.27½	.26¾	.26¼	.26¼
September	.27¾	.27½	.26¼	.26¼
October	.27¾	.27¾	.26¼	.26¼
November	.27¾	.27¾	.26¼	.26¼
December	.27¾	.27¾	.26¼	.26¼
Year	.27¾	.26¾	.27¾	.26¼

Epsom Salt, U.S.P.

October 18, 1871, the price was $3; 1881, $1.50; 1891, $1.10; 1901, $1.25; 1911, 90c.; 1913, $1.50; 1917, June, $4.37½.

	1928. Per 100 pounds Car lots, bags. H	L.	1929. H.	L.
January	$2.1a	$2.15	$2.15	$2.15
February	2.15	2.15	2.15	2.15
March	2.15	2.15	2.15	2.15
April	2.15	2.15	2.15	2.15
May	2.15	2.15	2.15	2.15
June	2.15	2.15	2.15	2.15
July	2.15	2.15	2.15	2.15
August	2.15	2.15	2.15	2.15
September	2.15	2.15	2.15	2.15
October	2.15	2.15	2.15	2.15
November	2.15	2.15	2.15	2.15
December	2.15	2.15	2.15	2.15
Year	2.15	2.15	2.15	2.15

Formaldehye

April 11, 1898, the price was 19c. to 20c.; October 18, 1901, 16c. to 17c.; 1911, 8½c. to 9½c.; 1913, 8½c. to 9½c.; 1920, March, 85c.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.08½	$0.08½	$0.09½	$0.09½
February	.08½	.08½	.09½	.09½
March	.08½	.08½	.09½	.09½
April	.08½	.08	.09½	.09½
May	.08	.08	.09½	.09½
June	.08	.07½	.09½	.09½
July	.08	.07½	.09½	.09½
August	.08½	.08½	.09½	.08½
September	.08½	.08½	.08½	.08½
October	.09½	.08½	.08½	.08½
November	.09½	.09½	.08½	.08½
December	.09½	.09½	.08½	.08½
Year	.09½	.07½	.09½	.08½

Glycerin, C.P.

May 20, 1872, the price was 58c. to 80c.; October 18, 1881, 36c. to 65c.; 1891, 13c. to 18c.; 1901, 14½c. to 14¾c.; 1911, 20c.; 1913, 21c.; 1917, October, 70c.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.19	$0.18	$0.13½	$0.13½
February	.17½	.16½	.13½	.13½
March	.16½	.13½	.13½	.13½
April	.13½	.15	.13½	.13
May	.15	.15	.15	.14½
June	.15	.15	.14	.14
July	.15	.15	.14	.13¾
August	.15	.15	.13¾	.13½
September	.15	.15	.14	.13½
October	.15½	.15	.14	.14
November	.15½	.15½	.14	.14
December	.15½	.15½	.14	.14
Year	.19	.15	.15½	.13½

Eighteen Years' Prices

	Per pound H.	L.
1929	$0.15½	$0.13½
1928	.19	.15
1927	.30	.20
1926	.30	.23
1925	.25	.19
1924	.19	.16½
1923	.18½	.16
1922	.18½	.14¾
1921	.20	.14
1920	.28½	.20
1919	.24	.20
1918	.68	.52
1917	.70	.52
1916	.60	.36½
1915	.65	.19¼
1914	.27	.19¼
1913	.21	.18¾
1912	.20	.16

Glycerin, Dynamite

December 30, 1895, the price was 14¾c. to 15c.; October 18, 1901, 13c. to 13¼c.; 1911, 16¼c. to 16½c.; 1913, 19¾c. to 20c.; 1917, October, 70c.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.15	$0.14	$0.12	$0.12
February	.12	.11¼	.12	.11½
March	.12	.11¼	.11½	.11½
April	.12	.11½	.11½	.11½
May	.12½	.12	.11½	.11
June	.12½	.12½	.11	.11
July	.12½	.12¼	.11	.10¾
August	.12¼	.12¼	.10¾	.10¾
September	.12½	.12¼	.11¾	.10¾
October	.13	.12½	.12	.11¾
November	.13	.13	.12	.12
December	.13	.12½	.12	.12
Year	.15	.11¼	.12	.10¾

Glycerin, Soaplye

August 1, 1904, the price was 9¼c. to 9¾c.; October 18, 1911, 12½c. to 13c.; 1913, 14¾c. to 14½c.; 1917, October, 51c.

	1928. Per pound H.	L.	1929. H.	L.
January	$0.09¼	$0.09	$0.07½	$0.07½
February	.08¾	.07¾	.07½	.07
March	.07¼	.07¼	.07	.07
April	.07¾	.07¼	.07	.07
May	.07¾	.07¾	.07	.07
June	.07¾	.07¾	.07	.07
July	.07¾	.07¾	.07	.0 .¾
August	.07¾	.07¼	.06¾	.06¾
September	.07½	.07½	.06¾	.06¾
October	.07½	.07½	.07¼	.06¾
November	.07½	.07½	.07¼	.07¼
December	.07½	.07¼	.07¾	.07¼
Year	.09¼	.07¼	.07¼	.06¾

Haarlem Oil, Domestic

May 29, 1872, the price of foreign oil was $3.50 to $4.00; October 18, 1901, foreign, $2 to $2.10; 1911, foreign, $1.85 to $2; 1913, foreign, $2; 1918, domestic, $8.50.

	1928. Per gross bottles H.	L.	1929. H.	L.
January	$3.25	$3.25	$3.25	$3.25
February	3.25	3.25	3.25	3.25
March	3.25	3.25	3.25	3.25
April	3.25	3.25	3.25	3.25
May	3.25	3.25	3.25	3.25
June	3.25	3.25	3.25	3.25
July	3.25	3.25	3.25	3.25
August	3.25	3.25	3.25	3.25
September	3.25	3.25	3.25	3.25
October	3.25	3.25	3.25	3.25
November	3.25	3.25	3.25	3.25
December	3.25	3.25	3.25	3.25
Year	3.25	3.25	3.25	3.25

Hypophosphites

August 20, 1894, the price of lime potash and soda was $1.02½ to $1.10; October 18, 1901, lime, 58c. to 70c.; potash, 58c. to 70c.; soda, 58c. to 70c.; 1911, lime, 60c. to 64c.; potash, 65c. to 69c.; soda, 65c. to 69c.; 1913, lime, 54c. to 58c.; potash, 59c. to 63c.; soda, 59c. to 63c.; 1918, lime, August, $1; potash, 1917, August, $2.15¼; soda, 1917, $1.10.

1928

	Lime. H.	Lime. L.	Potash. H.	Potash. L.	Soda. H.	Soda. L.
January	$0.60	$0.60	$0.80	$0.80	$0.70	$0.70
February	.60	.60	.80	.80	.70	.70
March	.60	.60	.80	.80	.70	.70
April	.60	.60	.80	.80	.70	.70
May	.60	.60	.80	.80	.70	.70
June	.60	.60	.80	.80	.70	.70
July	.60	.60	.80	.80	.70	.70
August	.60	.60	.80	.80	.70	.70
September	.60	.60	.80	.80	.70	.70
October	.60	.60	.80	.80	.70	.70
November	.60	.60	.80	.80	.70	.70
December	.60	.60	.80	.80	.70	.70
Year	.60	.60	.80	.80	.70	.70

1929

	Lime. H.	Lime. L.	Potash. H.	Potash. L.	Soda. H.	Soda. L.
January	$0.60	$0.60	$0.80	$0.80	$0.70	$0.70
February	.60	.60	.80	.80	.70	.70
March	.60	.60	.80	.80	.70	.70
April	.60	.60	.80	.80	.70	.70
May	.60	.60	.80	.80	.70	.70
June	.60	.60	.80	.80	.70	.70
July	.60	.60	.80	.80	.70	.70
August	.60	.60	.80	.80	.70	.70
September	.60	.60	.80	.80	.70	.70
October	.60	.60	.80	.80	.70	.70
November	.60	.60	.80	.80	.70	.70
December	.60	.60	.80	.80	.70	.70
Year	.60	.60	.80	.80	.70	.70

Iodide, Potash

May 29, 1872, the price was $9; October 18, 1881, $2.10; 1891, $2.59 to $2.63; 1901, $2.05 to $2.10; 1911, $2.10 to $2.15; 1913, $2.95 to $3; 1917, November, $3.75.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$3.50	$3.50	$3.50	$3.50
February	3.50	3.50	3.50	3.50
March	3.50	3.50	3.50	3.50
April	3.50	3.50	3.50	3.50
May	3.50	3.50	3.50	3.50
June	3.65	3.65	3.50	3.25
July	3.65	3.65	3.25	3.25
August	3.75	3.65	3.25	3.25
September	3.75	3.75	3.25	3.25
October	3.75	3.75	3.25	3.25
November	3.50	3.50	3.25	3.25
December	3.50	3.50	3.25	3.25
Year	3.75	3.50	3.50	3.25

Iodine, Resublimed

May 29, 1872, the price was $11; October 18, 1881, $3.25; 1891, $3.30 to $3.35; 1901, $2.70 to $2.75; 1911, $2.60 to $2.65; 1913, $3.55 to $3.60; 1919, August, $4.50.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$4.65	$4.65	$4.65	$4.65
February	4.65	4.65	4.65	4.65
March	4.65	4.65	4.65	4.65
April	4.65	4.65	4.65	4.65
May	4.65	4.65	4.65	4.65
June	4.65	4.65	4.65	4.65
July	4.65	4.65	4.65	4.65
August	4.65	4.65	4.65	4.65
September	4.65	4.65	4.65	4.65
October	4.65	4.65	4.65	4.65
November	4.65	4.65	4.65	4.65
December	4.65	4.65	4.65	4.65
Year	4.65	4.65	4.65	4.65

Magnesia Carbonate, Calcined, U.S.P.

May 29, 1872, the price was 20c. to 32c.; October 18, 1881, 18c. to 19c.; 1911, 5¼c. to 6¾c.; 1913, 5½c. to 6c.; 1918, April, 25c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.45	$0.45	$0.45	$0.45
February	.40	.40	.45	.45
March	.40	.40	.45	.45
April	.40	.40	.45	.45
May	.40	.40	.45	.45
June	.40	.40	.45	.45
July	.40	.40	.45	.45
August	.40	.40	.45	.45
September	.40	.40	.45	.45
October	.40	.40	.45	.45
November	.40	.40	.45	.45
December	.40	.40	.45	.45
Year	.45	.40	.45	.45

Menthol, Imported

April 23, 1884, the price was $8.50; October 18, 1891, $2.40 to $3.50; 1901, $4.25 to $4.50; 1911, $6; 1913, $4.10 to $4.25; 1920, January, $14.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$4.35	$4.25	$6.00	$5.60
February	4.30	4.00	6.00	5.75
March	4.10	4.10	5.75	5.35
April	4.05	4.05	5.30	5.20
May	4.10	4.00	5.25	5.20
June	4.25	4.25	5.00	5.00
July	5.00	4.25	5.25	5.00
August	5.25	5.00	5.00	4.85
September	5.00	5.00	4.85	4.50
October	6.00	5.00	4.60	4.50
November	6.15	5.90	4.50	4.40
December	5.50	5.25	4.50	4.50
Year	6.15	4.00	6.00	4.40

Thirty-five Years' Prices

	H.	L.
1929	$6.00	$4.40
1928	6.15	4.00
1927	4.75	3.95
1926	7.00	4.30
1925	12.75	7.50
1924	14.25	10.75
1923	19.50	7.75
1922	10.50	5.25
1921	5.25	3.75
1920	14.00	4.00
1919	7.40	3.13
1918	7.40	3.15
1917	3.50	2.85
1916	3.40	2.75
1915	3.50	2.50
1914	4.75	2.35
1913	10.25	2.70
1912	14.00	6.00
1911	7.00	3.45
1910	3.45	2.05
1909	2.75	2.05
1908	2.15	1.85
1907	2.60	1.90
1906	2.90	2.15
1905	3.00	1.75
1904	6.25	2.50
1903	8.00	5.25
1902	7.00	3.80
1901	4.75	3.50
1900	3.90	2.35
1899	2.00	1.20
1898	2.60	2.00
1897	4.20	1.85
1896	4.75	2.50
1895	4.75	4.50

Mercury and Derivatives

Quicksilver (Mercury)

October 18, 1871, the price was $63; 1881, $34; 1891, $46.50 to $48; 1901, $49.88 to $51; 1911, $47.25; 1913, $40.50; 1917, February, $140.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$125.00	$124.00	$123.00	$120.00
February	123.00	122.00	123.00	120.00
March	123.00	120.00	123.50	123.00
April	124.50	123.00	123.50	123.50
May	124.50	123.50	123.50	123.50
June	125.00	123.00	123.50	121.00
July	122.50	121.00	121.00	121.00
August	127.00	121.00	125.00	121.00
September	130.00	128.00	125.00	124.50
October	132.50	124.00	124.50	124.00
November	124.00	124.00	124.00	124.00
December	124.00	123.00	124.00	124.00
Year	132.50	120.00	125.00	120.00

Calomel

June 5, 1872, the price was $1 to $1.35; October 18, 1881, 60c. to 95c.; 1891, 78c. to $1.10; 1901, 86c. to $1.10; 1911, 94c. to $1.10; 1913, 63c. to $1.02½; 1918, July, $2.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.05	$2.05	$2.05	$2.05
February	2.05	2.05	2.05	2.05
March	2.05	2.05	2.05	2.05
April	2.05	2.05	2.05	2.05
May	2.05	2.05	2.05	2.05
June	2.05	2.05	2.05	2.05
July	2.05	2.05	2.05	2.05
August	2.05	2.05	2.05	2.05
September	2.05	2.05	2.05	2.05
October	2.05	2.05	2.05	2.05
November	2.05	2.05	2.05	2.05
December	2.05	2.05	2.05	2.05
Year	2.05	2.05	2.05	2.05

Mercury Bisulphate

November 9, 1903, the price was 55c. to 57c.; October 18, 1911, 68c. to 70c.; 1913, 43c. to 47c.; 1918, July, $1.58.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.61	$1.63	$1.63	$1.63
February	1.63	1.63	1.63	1.63
March	1.63	1.63	1.63	1.63
April	1.63	1.63	1.63	1.63
May	1.63	1.63	1.63	1.63
June	1.63	1.63	1.63	1.63
July	1.63	1.63	1.63	1.63
August	1.63	1.63	1.63	1.63
September	1.63	1.63	1.63	1.63
October	1.63	1.63	1.63	1.63
November	1.61	1.63	1.63	1.63
December	1.63	1.63	1.63	1.63
Year	1.63	1.63	1.63	1.63

Red Precipitate

November 22, 1871, the price was $1 to $1.05; October 21, 1885, 70c.; 1891, 91c. to 94c.; 1901, 96c. to 98c.; 1911, $1.04 to $1.14; 1913, 79c. to 89c.; 1918, July, $2.19.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.16	$2.16	$2.16	$2.16
February	2.16	2.16	2.16	2.16
March	2.16	2.16	2.16	2.16
April	2.16	2.16	2.16	2.16
May	2.16	2.16	2.16	2.16
June	2.16	2.16	2.16	2.16
July	2.16	2.16	2.16	2.16
August	2.16	2.16	2.16	2.16
September	2.16	2.16	2.16	2.16
October	2.14	2.16	2.16	2.16
November	2.16	2.16	2.16	2.16
December	2.16	2.16	2.16	2.16
Year	2.16	2.16	2.16	2.16

White Precipitate

August 1, 1877, the price was 90c.; October 21, 1885, 75c.; 1891, 96c. to $1; 1901, $1.01 to $1.03; 1911, $1.09 to $1.14; 1913, 84c. to 89c.; 1918, July, $2.29.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.24	$2.24	$2.24	$2.24
February	2.24	2.24	2.24	2.24
March	2.24	2.24	2.24	2.24
April	2.24	2.24	2.24	2.24
May	2.24	2.24	2.24	2.24
June	2.24	2.24	2.24	2.24
July	2.24	2.24	2.24	2.24
August	2.24	2.24	2.24	2.24
September	2.24	2.24	2.24	2.24
October	2.24	2.24	2.24	2.24
November	2.24	2.24	2.24	2.24
December	2.24	2.24	2.24	2.24
Year	2.24	2.24	2.24	2.24

Blue Mass, U.S.P.

June 5, 1872, the price was $1 to $1.10; March 2, 1896 33c. to 34c.; October 18, 1901, 41c. to 42c.; 1911, 46c. to 48c.; 1913, 42c. to 44c.; 1918, July, 95c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.02	$1.02	$1.02	$1.02
February	1.02	1.02	1.02	1.02
March	1.02	1.02	1.02	1.02
April	1.02	1.02	1.02	1.02
May	1.02	1.02	1.02	1.02
June	1.02	1.02	1.02	1.02
July	1.02	1.02	1.02	1.02
August	1.02	1.02	1.02	1.02
September	1.02	1.02	1.02	1.02
October	1.02	1.02	1.02	1.02
November	1.02	1.02	1.02	1.02
December	1.02	1.02	1.02	1.02
Year	1.02	1.02	1.02	1.02

Mercurial Ointment, 33 1/3 Percent

August 1, 1877, the price was 40c. to 50c.; October 21, 1907, 30c. to 32c.; 1911, 42c. to 44c.; 1913, 38c. to 40c.; 1918, July, 93c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.94	$0.94	$0.94	$0.94
February	.94	.94	.94	.94
March	.94	.94	.94	.94
April	.94	.94	.94	.94
May	.94	.94	.94	.94
June	.94	.94	.94	.94
July	.94	.94	.94	.94
August	.94	.94	.94	.94
September	.94	.94	.94	.94
October	.94	.94	.94	.94
November	.94	.94	.94	.94
December	.94	.94	.94	.94
Year	.94	.94	.94	.94

Mercurial Ointment, 50 Percent

October 21, 1907, the price was 40c. to 42c.; 1911, 52c. to 54c.; 1913, 48c. to 50c.; 1918, July, $1.30.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.28	$1.28	$1.28	$1.28
February	1.28	1.28	1.28	1.28
March	1.28	1.28	1.28	1.28
April	1.28	1.28	1.28	1..8
May	1.28	1.28	1.28	1.28
June	1.28	1.28	1.28	1.28
July	1.28	1.28	1.28	1.28
July	1.28	1.28	1.28	1.28
August	1.28	1.28	1.28	1.28
September	1.28	1.28	1.28	1.28
October	1.28	1.28	1.28	1.28
November	1.28	1.28	1.28	1.28
December	1.28	1.28	1.28	1.28
Year	1.28	1.28	1.28	1.28

Opium and Derivatives

Opium Gum

October 18, 1871, the price was $4; 1881, $3 to $3.12; 1891, $1.80 to $1.90; 1901, $3.12 to $3.19; 1911, $8; 1913, $5.75 to $5.90; 1917, May, $30.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$12.00	$12.00	$12.00	$12.00
February	12.00	12.00	12.00	12.00
March	12.00	12.00	12.00	12.00
April	12.00	12.00	12.00	12.00
May	12.00	12.00	12.00	12.00
June	12.00	12.00	12.00	12.00
July	12.00	12.00	12.90	12.00
August	12.00	12.00	12.90	12.90
September	12.00	12.00	12.90	12.90
October	12.00	12.00	12.90	12.90
November	12.00	12.00	12.90	12.90
December	12.00	12.00	12.90	12.90
Year	12.00	12.00	12.90	12.00

Crops and Prices Since 1870

The following table shows the opium crops and the high and low prices for cases on spot since 1870:—

Year.	Crop, cases.	Prices H.	Prices L.
1929	....	$12.90	$12.00
1928	....	12.00	12.00
1927	....	12.00	12.00
1926	3,150	12.00	12.00
1925	3,500	12.00	12.00
1924	2,500	12.00	18.00
1923	2,200	8.00	6.75
1922	1,100	6.75	5.50
1921	1,500	7.50	5.50
1920	....	7.50	6.25
1919	....	22.50	6.75
1918	....	30.00	21.50
1917	....	30.00	13.50
1916	....	13.50	10.75
1915	7,500	11.00	6.90
1914	7,500	10.00	6.00
1913	8,500	6.60	5.60
1912	6,500	8.50	6.00
1911	10,500	8.50	4.70
1910	4,800	6.00	4.80
1909	4,800	6.00	4.00
1908	4,650	5.75	4.05
1907	3,000	7.00	3.45
1906	7,500	3.50	2.72½
1905	3,700	3.30	2.72½
1904	11,200	2.95	2.62½
1903	3,200	3.50	2.70
1902	10,000	3.05	2.70
1901	5,600	3.45	3.00
1900	8,200	3.45	3.00
1899	6,400	3.37½	2.80
1898	3,000	3.75	2.70
1897	7,000	2.80	1.95
1896	3,600	2.40	1.90
1895	7,500	2.30	1.60
1894	4,500	3.25	1.85
1893	2,845	3.15	1.77½
1892	7,500	1.90	1.50
1891	7,400	2.25	1.75
1890	5,300	3.85	2.00
1889	5,500	3.40	2.82½
1888	8,700	3.87½	2.65
1887	7,800	4.60	3.25
1886	7,500	3.25	2.80
1885	7,000	3.90	3.30
1884	5,000	4.10	3.50
1883	6,500	4.12½	3.50
1882	5,500	4.50	3.87½
1881	10,000	6.25	3.90
1880	2,000	7.75	4.87½
1879	4,000	5.25	4.35
1878	5,500	4.70	4.25
1877	9,500	6.70	4.75
1876	3,280	6.60	4.75
1875	6,489	7.75	5.00
1874	2,300	9.00	5.00
1873	3,200	7.90	5.95
1872	4,500	7.90	6.10
1871	7,961	6.00	4.90
1870	4,273	9.40	5.25

Opium, Granular or Powdered

November 22, 1871, the price was $7.40 to $7.50; October 18, 1881, $5.50; 1891, $2.80 to $2.85; 1901, $4 to $4.10; 1911, $8.65 to $8.75; 1913, $7.35 to $7.40; 1917, April, $33.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$13.00	$13.00	$13.00	$13.00
February	13.00	13.00	13.00	13.00
March	13.00	13.00	13.00	13.00
April	13.00	13.00	13.00	13.00
May	13.00	13.00	13.00	13.00
June	13.00	13.00	13.00	13.00
July	13.00	13.00	13.85	13.00
August	13.00	13.00	13.85	13.85
September	13.00	13.00	13.85	13.85
October	13.00	13.00	13.85	13.85
November	13.00	13.00	13.85	13.85
December	13.00	13.00	13.85	13.85
Year	13.00	13.00	13.85	13.00

Codeine Sulphate

December 20, 1897, the price was $3.95; October 18, 1901, $4.20 to $4.50; 1911, $5.40 to $5.55; 1913, $5 to $5.15; 1917, February, $11.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$8.75	$8.75	$8.25	$8.25
February	8.75	8.75	8.25	8.25
March	8.75	8.75	8.25	8.25
April	8.75	8.75	8.25	8.25
May	8.75	8.75	8.25	8.25
June	8.75	8.75	8.25	8.25
July	8.75	8.25	9.50	8.25
August	8.25	8.25	9.50	9.50
September	8.25	8.25	9.50	9.50
October	8.25	8.25	9.50	9.50
November	8.25	8.25	9.50	9.50
December	8.25	8.25	9.50	9.50
Year	8.75	8.25	9.50	8.25

Morphine Sulphate

October 18, 1871, the price was $4.80; 1881, $3.65 to $3.75; 1891, $1.80 to $2.10; 1901, $1.70 to $1.85; 1911, $4.20 to $4.30; 1913, $4.20 to $4.30; 1917, October, $13.80.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$8.25	$8.25	$7.75	$7.75
February	8.25	8.25	7.75	7.75
March	8.25	8.25	7.75	7.75
April	8.25	8.25	7.75	7.75
May	8.25	8.25	7.75	7.75
June	8.25	8.25	7.75	7.75
July	8.25	7.75	8.75	7.75
August	7.75	7.75	8.75	8.75
September	7.75	7.75	8.75	8.75
October	7.75	7.75	8.75	8.75
November	7.75	7.75	8.75	8.75
December	7.75	7.75	8.75	8.75
Year	8.25	7.75	8.75	7.75

Potassium Permanganate, U.S.P.

October 18, 1901, the price was 9c. to 11c.; 1911, 9¾c. to 10¾c.; 1913, 9¾c. to 10c.; 1917, July, $4.10.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.15	$0.15	$0.16	$0.16
February	.15	.15	.16	.16
March	.15	.15	.16	.16
April	.15	.15	.16	.16
May	.15	.15	.16	.16
June	.15	.15	.16	.16
July	.15	.15	.16	.16
August	.15	.15	.16	.16
September	.15	.15	.16	.16
October	.15	.15	.16	.16
November	.15	.15	.16	.16
December	.16	.15	.16	.16
Year	.16	.15	.16	.16

Quinine Sulphate, American

October 18, 1871, the price was $2.50; 1881, $1.85 to $1.90; 1891, 24c. to 25c.; 1901, 28c.; 1911, 14c.; 1913, 23c. to 28c.; 1918, May, 90c.

(Manufacturers' Prices)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.40	$0.40	$0.40	$0.40
February	.40	.40	.40	.40
March	.40	.40	.40	.40
April	.40	.40	.40	.40
May	.40	.40	.40	.40
June	.40	.40	.40	.40
July	.40	.40	.40	.40
August	.40	.40	.40	.40
September	.40	.40	.40	.40
October	.40	.40	.40	.40
November	.40	.40	.40	.40
December	.40	.40	.40	.40
Year	.40	.40	.40	.40

Forty-three Years' Prices

	H.	L.
1929	$0.40	$0.40
1928	.40	.40
1927	.40	.40
1926	.50	.40
1925	.50	.50
1924	.50	.50
1923	.50	.50
1922	.60	.50
1921	.70	.60
1920	.90	.70
1919	.90	.80
1918	.90	.75
1917	.75	.55
1916	.75	.50
1915	.75	.26
1914	.31	.26
1913	.26	.19¼
1912	.19½	.14
1911	.14	.14
1910	.14	.14
1909	.15	.14
1908	.16	.15
1907	.22	.16
1906	.19	.14½
1905	.23	.19
1904	.27	.21
1903	.28	.23
1902	.28	.20
1901	.34	.27
1900	.37	.29
1899	.40	.21
1898	.25	.18
1897	.30	.15
1896	.27	.17½
1895	.28	.25
1894	.27½	.25½
1893	.25	.20
1892	.24	.20
1891	.30	.24
1890	.37	.32
1889	.40	.32
1888	.49	.40
1887	.61	.35
1886	.73	.49

Note.—Prices for bulk quinine salts based on sulphate for the years cited.

Rochelle Salt

October 18, 1881, the price was 25c.; 1891, 25c.; 1901, 16½c. to 17½c.; 1911, 19c. to 19½c.; 1913, 18c. to 18½c.; 1918, August, 46½c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.23	$0.23	$0.23	$0.23
February	.23	.23	.23	.23
March	.23	.23	.23	.23
April	.23	.23	.23	.23
May	.23	.23	.23	.23
June	.23	.23	.23	.23
July	.23	.23	.23	.23
August	.23	.23	.23	.23
September	.23	.23	.23	.23
October	.23	.23	.23	.23
November	.23	.23	.23	.23
December	.23	.23	.23	.23
Year	.23	.23	.23	.23

Saccharin, Soluble

December 11, 1905, the price was $1.50 to $1.75; October 18, 1911, $1.25 to $1.50; 1913, $1.25, to $1.50; 1917, August, $42.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.70	$1.70	$1.70	$1.70
February	1.70	1.70	1.70	1.70
March	1.70	1.70	1.70	1.70
April	1.70	1.70	1.70	1.70
May	1.70	1.70	1.70	1.70
June	1.70	1.70	1.70	1.70
July	1.70	1.70	1.70	1.70
August	1.70	1.70	1.70	1.70
September	1.70	1.70	1.70	1.70
October	1.70	1.70	1.70	1.70
November	1.70	1.70	1.70	1.70
December	1.70	1.70	1.70	1.70
Year	1.70	1.70	1.70	1.70

(Continued on page 81)

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Botanical Drugs: Market Review

Price trend in the botanical market during 1929 was downward when viewed in perspective. While trade in the early part of the year reached exceptional volume, that era of prosperity was succeeded by a much longer period in which prices were under pressure and declines were extensive and continuous enough to suggest a definite market trend toward lower levels. The excellent showing in the first quarter of the year was due directly to the epidemic of influenza that spread over the land and which turned salesmen into mere order takers. The problem of botanical dealers was to get sufficient stocks wherewith to meet demand; they had to do very little work so far as obtaining business was concerned. Collection of botanicals during the summer and fall periods was not excessive. In fact, many complaints about the difficulty in obtaining sufficient labor to collect the needed crops were noted from many quarters. Despite this absence of a large surplus and irrespective of the fact that workers were paid substantial premiums in order to encourage collection, it cannot but be said that prices throughout the year were generally more favorable to buyers. A contributing factor to the liquidation of values was the sharp shut down in trade during the last two months of the year. General financial depression developed first in the securities markets and later spread to the commodity markets in this country. Subsequently, it also extended to the many primary markets throughout the world whence come many botanicals consumed in the United States.

A broad view of the liquidation of higher prices during most of the year may be gained from the trend of the Reporter's index number.

Price changes each quarter of 1929, 1928 and 1927 compare as follows:—

	First quarter		
	1929.	1928.	1927.
Advances	169	239	243
Reductions	157	183	230
Totals	226	422	473
	Second quarter		
	1929.	1928.	1927.
Advances	107	160	161
Reductions	279	265	324
Totals	386	425	485
	Third quarter		
	1929.	1928.	1927.
Advances	178	187	221
Reductions	274	238	243
Totals	452	425	464
	Fourth quarter		
	1929.	1928.	1927.
Advances	105	205	219
Reductions	268	225	267
Totals	373	430	486
	Whole year		
	1929.	1928.	1927.
Advances	559	791	844
Reductions	978	911	1,064
Totals	1,537	1,702	1,908

Comparative Values

Oil, Paint and Drug Reporter index numbers, based on 100 as the average price for forty botanical drugs (twenty domestic and twenty foreign), August 1, 1924, ranged as follows by quarters over 1928:—

Jan. 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
120.3	118.3	113	112.2	106.1

Balsams

Stability in prices prevailed in the market for balsam copaiba during the year. Prices were on a basis generally lower than those in the early part of the previous year, but they approximated closely those that had prevailed in the last three months in 1928. Para balsam opened the year at 31c. per pound and was so quoted until April, when the market was reduced to 30c. In May, business was done at both 30c. and 31c. per pound. The market was established at 31c. in June and remained there for the balance of the year. South American balsam was priced at 33c. per pound from January through most of April, but in the latter part of that month sales were made at 32c. In May, the market began at 32c. and ended at 33c. The latter figure remained stable until December, when a decline brought quotations to 32c. at the close of the year.

Canada balsam fir moved steadily in buyers' favor throughout the year. Quotations were $12 per gallon in January and February, but in March they were as low as $11.75. By the end of May they were down to $11 per gallon, and that quotation continued to be the market from May through most of December. However, in the latter month, they were also reduced to the low for the year, being $10.50.

Oregon balsam fir was exceptionally stable throughout the year. Prices opened at $1 per gallon. They were unchanged until late December, when business was done at 98c.

Balsam Peru opened at $1.70 per pound and in February reached $1.90. The advance was extended to $2.05 per pound in March, but in April the market sank from that figure to $1.70. In May, they recovered to $1.95 per pound and remained there during June, July, and a portion of August. They were reduced to $1.90 late in the latter month. From then until late December they remained stable at $1.90, only to close the year at $1.80.

Balsam tolu was advanced in good demand from $1.10 to $1.15 per pound in January. February and March found the market at $1.15. In April, $1.20 was reached, being the high point for the year. A decline in May put quotations on the basis of $1.10, which was also low for the year and which remained the market through the balance of the year until late in December demand put the market to $1.20 and held it firm thereat at the close of the twelvemonth period.

Barks

While business early in the year was rather brisk, it was slower as the year progressed. Features were the heavy drainage on stocks of wild cherry and white pine bark as well as on those of select sassafras and elm.

Black haw root bark began the year at 28c. and ended at 25c. per pound. The decline was rather steady during the year. Quotations in January and February were 28c. per pound. In March, April and May they were 27c. Fluctuations were between 25c. and 26c. in June. In July quotations sagged to 25c. as an unchanged basis for that month. For the balance of the year quotations were 25c.

Cinchona bark was bought heavily early in the year at 58c. per pound for short quill. The market held at 58c. from January to the end of August. In September offerings came out at 52c. and continued to be made at that price over the rest of the year.

Cascara was a rather inactive article so far as prices were concerned most of the year. The market might be called rather stable at 13c. and 14c., those quotations prevailing at different times. Quotations were 13c. during the first quarter of the year. In April 14c. was reached and kept as the market until August, when quotations were established again at 13c. and maintained thereat until the end of the year. The feature at the end of the period was the report that surplus stocks in the primary market had been rather well eliminated and that the market might be expected to do better during the new year.

Condurango was quoted at 13½c. in January and advanced to 14c. in the next month. March found the market at 15c. per pound, but in April it declined to 14½c. May and part of June were noted at 14½c., but by the end of the latter month 14c. was being done. July was a month for business done at 14c. also. In August 14½c. was named and kept as the minimum spot quotation for the rest of the year.

Elm bark was in high request early in the year. Sales were progressively large and resulted in virtual exhaustion of all stocks in the primary market, and so reduced those in the hands of local dealers as to make most quotations nominal. The influenza had a marked effect on business done in the select article in bundles obtained from the Middle West. The demand during January and extending through July resulted in quotations being advanced from 23c., the low for the year, to 30c., the latter figure being reached in June and kept as the market during the next month. With a poor outlook for new crop, the market continued to advance, and in September it was strong at 35c. per pound, with stocks well contracted for and an outlook that had no place for potential weakness for the balance of 1929 and the first six months of 1930. Prices were maintained at 35c., and competition to the end of the year was negligible.

Lemon peel advanced from 9½c., quoted in January, February and a part of March, to the basis of 11c. per pound, reached as the latter month passed out. In April business was also done at 11c., but improvement in stocks resulted in a decline to 9½c. by the end of that month. No further change in price came until toward the end of August, when quotations were reduced to 9c. From then on prices were very steady and free from fluctuation.

Orange peel enjoyed stability of price almost throughout the year. Quotations were 10c. per pound from January through July, barring March, when the market was 11c. because of demand. Late in July quotations were raised to 11c., and in the next month 12c. was done frequently. In September a firm market was established at 11c. per pound, which price made the market for the rest of the year.

Demand advanced prickly ash bark from 14c. per pound in January and February to 15c., which prevailed until August. In the latter month quotations reacted to 13½c., and remained thereat until December, when 13c. became the market. Demand was best early in the year.

Scarcity of stocks in the foreign markets resulted in prices for soap bark being stronger and somewhat higher during the first quarter of the year. During that time whole was advanced from 13c. to 15c. per pound. In April the market declined from 15c. to 12c. per pound. Quotations remained at 12c. to the end of November. In December they were reduced to 11c., the low point for the year. Cut and sifted bark was 14½c. during January and February. In March the market reached the high for the year at 16½c. Declines then set in, bringing the market down from 15½c. to the basis of 13½c. in April. Stabilization then set in. Quotations were held at 13½c. during May, June and a part of July. In the latter month they were reduced to 12½c. In August they declined from 12½c. to a new position at 11½c. Recovery to 12c. per pound came in September, and the market held thereat for the rest of the year.

Wahoo bark of root was high for the year at 55c., quoted in January and February. It was low at 48c., reached in December. April, May, June and part of July found prices stable at 48c., followed by recovery to 50c. in August. The market held unchanged until late in December, when 48c. was again established.

Demand for wild cherry bark was a strong feature of the market during the first quarter in the year. Rossed thin green was bought actively and reductions in stocks to very small reserves turned request progressively into the market for thin natural. Sales of the latter bulked big in the affairs of the year. In fact, from October, 1928, to the end of March, 1929, the movement into consumption was in large volume. Demand in January shot quotations from 7½c. per pound to the high for the year—11c. per pound. February business was written at 11c., too. In March, some falling away in request resulted in prices being set down to 10c. A more normal condition of demand came with April and quotations were reduced from 10c. to the basis of 8c. in that month. During May, June, and most of July 8c. was quoted, with demand reported to be routing. Late in August 7½c. was established on a very firm basis and was continued as the market for the rest of the year.

Beans

Vanilla beans were the leading feature of this market group during 1929. The outstanding development of the year was the severity of competition that developed during the second part of the year when certain importers undertook to force prices downward by offering substantial quantities for shipment, not on a firm basis in all instances, but usually confining proposals to a basis contingent on the orders being placed in France. However, there was no avoiding the fact that prices for Bourbons throughout the year were highly favorable for buyers in large quantities. Competition was keen and the tendency to shade values was almost universal. Prices for Bourbons were cheapest at $1.40 per pound, the lowest position on spot since 1907, when $1.25 was done. Quotations in January were $1.65 per pound for the minimum quality of beans that were still good merchantable goods. In February quotations were $1.60. In March they sagged to $1.40 per pound and continued at that point during April and May. In June recovery came and quotations advanced, first, to $1.85 per pound and, finally, to $2 per pound. During July and August the market held at $2. In September as high as $2.15 was reached, but by the end of the month the effects of the type of competition mentioned above put spot quotations down to $1.85. They remained at that figure for the balance of the year so far as sweet, pure beans were concerned. There was no questioning the presence of off quality merchandise being available at less than $1.85 during the last quarter of the year. However, those selling at less than that oftentimes had difficulty in enforcing deliveries. Buyers in a number of instances rejected tenders and insisted that sellers deliver sound sweet merchandise against their contracts.

Mexicans were more stable throughout the year. The crop had been a comparatively light one, a fact that eliminated most competition and tended to create a firm foundation for values during the greater portion of the year. Furthermore, as the outlook for the next crop was not exceptionally favorable, that fact also tended to keep prices subject to rather strong undertones. Quotations were $3.25 per pound, minimum as to quality, from January through August. In September they were jacked up to $3.50 and remained thereat for the rest of the year. South American beans were featured mainly by a severe reduction in the crop and a reduction of the quantities likely to be produced in 1930. The outlook for the latter crop was said to point to a total production of about 2,000 cases, against 12,000 to 15,000 cases in normal years. The curtailment has been due to widespread destruction of vanilla bean vines by tropical hurricanes in 1929. Importations of vanilla beans, all kinds included, for eleven months in 1929 totaled 1,266,447 pounds, as compared with 1,335,869 pounds during the corresponding period in 1928.

Berries

Prices for most berries were rather well stabilized during the greater part of 1929. Cubebs were priced at 36c. per pound for the XX quality throughout the year. Powder was named at 40c. until in December, when quotations were down to 38c. However, a feature of the year was the difficulty experienced in obtaining shipment of berries the quality of which would assure them being passed by the Department of Agriculture. Rejections were numerous throughout the year. Juniper berries sold in good volume during the year. The market was strong, due to demand and questions of quality, during the first six months, quotations rising from 5½c. in January to 7c. in February, which quotations held to the end of June. In July they reacted to 6½c. For the balance of the year quotations were very firm and entirely stable at 6½c., with competition moderate and sales noted in satisfactory volume.

Flowers

Features in the flower group included a continued decline in the replacement cost of arnica flowers, a virtual crop failure in Roman chamomile, weakness and lowered production costs for powdered pyrethrum, and a declining market for Spanish saffron. Crop conditions were such as to influence the trend of values, principally in favor of buyers for consumption.

Price history of arnica flowers during the past two years has been principally downward. While early in the season reports from Europe suggested the possibility of the decline being checked, the event proved the contrary. The market here was highest in January and part of February, when quotations were $1 per pound; it was 90c. at the end of the latter month. From then on, continuously throughout the year and with but occasional and short-lived upward reactions, prices moved steadily in favor of buyers. The low point for the year was 33c., reached under poor demand and plenty of supplies in December.

For the greater part of the year, Roman chamomile was placed favorable for buyers who would bid for supplies. Quotations dropped from 50c. per pound quoted in January until 39c. was reached in July. The reductions stopped then. News from Europe soon became bullish when it was learned that crop prospects had been damaged by the unseasonable weather. On confirmation that the crop would be not much more than 25 percent of normal, price trend turned upward. Starting at 39c. in August, the market for that month reached 45c. within a short time. In September and October, light demand made the spot quotation 44c., but the situation was none the less strong. In November no sales were made for less than 47c. as a market price. The full effect of crop failure was realized when, in December, and despite very poor spot demand, the market here was advanced sharply until 75c. was readily obtained.

Pyrethrum in powdered form early in the year was quoted at 42c. per pound, named in the period January-March. In April, May, June and part of July 44c. was done. Late in July the market went down sharply to 40c. It remained there in August, but in September was let down to 39c., which remained the market for the rest of the year. Declines in the replacement cost of pyrethrum flowers in the primary markets caused the movement in prices for powder to consumers.

Spanish saffron suffered mainly from the fluctuations in exchange on the primary market. To be sure, basic weakness came toward the end of the year, when there was a general liquidation of values forced by world-wide financial unsettlement, but in the main it was competition in terms of exchange advantage that turned prices to a downward direction. Quotations in January were $11.25 per pound. In February they were $11.50. Also, in part of March; but a decline came before the end of that month, quotations coming to $11.25 again. The decline was extended to $11 in April. In May, June, July, and a part of August, limited demand was filled at $11, but toward the end of that month quotations were put on a basis of $11.50, which was also the market for September and October. In November, $10.50 was done, and for a while in December $11 was the market. In fact, the market was said to have strengthened considerably toward the close of the year, due to the exchange situation.

Herbs and Leaves

The unsettlement in buchu leaves, due to prospective removal of the duty

on that article, was a feature. Belladonna was subject to considerable activity most of the time, and a deal of price shifting was noted. Cannabis reached prominence through the proposal to add that article to those controlled by the Narcotic Drug Import and Export act. Prince's pine was noteworthy because of short stocks.

Aconite leaf was fairly stable throughout the year. Price changes were few and the entire range of movement throughout the year was never in excess of 1c. The market was high at 12c. per pound in January-June, 11c. being reached in the latter month. In July quotations returned to 12c. and remained there until November, when 11c. was again done. The market ended the year at that price.

Belladonna sold at 16c. in January and went to 17c. in February, holding there in March. April found quotations back at 16c., with May through September business being booked at the same price. An advance in September made the market considerably stronger at 18c. By the end of October 19c. was being done on good quality leaf, but the light demand that featured November and December was responsible for making the market 17c. during that period.

Buchu leaves were rather quiet in the early part of the year, the market being 39c. per pound in the first weeks of January, only to be reduced to 38½c. before the end of that month. By the close of February 37c. was being done, also under poor request. March orders were filled at 37c. and 38c. A stronger position developed in April and business done advanced the market from 38c. to 40c. per pound. Stabilization was achieved in May at 36c. per pound. In June prices were down 1c. and in July they were off 1c. more, making the market 35c. in the latter month. The decline was extended in August and small business was done at 34c., and finally at 33c. September was a month of violent upward reaction in prices, the rise being traced to primary market advances and advices. Quotations were low at 34c. in September and they reached 45c. on good demand and small supply on spot. October held the market firm at 45c. November came in at 45c., but went out at 44c. December, and small demand, found sellers naming first 44c. and finally 39c. The decline was attributed to the desire of some holders to liquidate as much of their stock withdrawn from bond as they could in view of the possibility of the duty of 10c. being removed when, and if, a new tariff should be passed. The feature at this time was the fact that many consumers were holding considerable supplies in bonded warehouse, withdrawing goods only as needed in order to make the duty saving when the tariff should be passed.

Proposal to place cannabis sativa within the control of the Narcotic Drug Import and Export Act was sufficient to run prices from 22c. to 28c. per pound shortly after the turn of the year. Price trend during the year was downward, however. Quotations were 28c. in January, the high for the year. They were down to 21c. in April, then were unchanged until July, when the low for the year was reached at 20c. In August, sellers returned the market to 22c. and held it there for the rest of the year.

Deer tongue was quoted 10c. per pound from January until June, in which month quotations were reduced to 9c. They remained unchanged for the balance of 1929. Prince's pine became very hard to obtain in May. The opening price for the year was 15c., but in March 14½c. was set and that continued in April. In May quotations were advanced from 14½c. to 24c. per pound, the advance tracing directly to scarcity of supplies here and especially in the primary market. In June 25c. and then 26c. was done. In July values rose from 26c. and touched 28c. strongly and with evident power enough to suggest continued rise. The extension of the advance was delayed until October, when it came through suddenly with the pressure of demand back of the movement. The market became 40c. per pound. In November 40c. continued to be the market and it remained thereat until the limited demand in December accounted for a recession to 35c.

Miscellaneous

Ergot lacked the spectacular feature that prevailed in the previous year. Price moment favored buyers at all times, declines being steady until 62c. was reached in June; the market had begun the year at 90c. From June through the balance of the year the market was 62c. in a very steady position that found demand routine in all respects. Trading out of spot stocks was not very active, as most of the larger manufacturing consumers bought their merchandise direct in the primary market. The high for the year was 95c., reached in February and maintained through March, after which the decline set in.

Lycopodium sold in a limited way steadily throughout the year. At times stocks were short and strength developed in the market undertone. Quotations in January were 73c. and by the end of February they had reached 70c. per pound. The low for March was 65c. April and May business was easily worked at 63c. In June the market was short of supplies and the market advanced from the early price of 65c. to a strong position at 70c. late in the month. In June quotations were set back to 64c. and 65c. per pound. From August through November 65c. was the market. In December the low point for the year was reached at 60c.

Manna in both forms was not in excess supply at any time during the year. Shortage was emphasized by the loss of a considerable production due to unseasonable rains. Prices were generally on the strong side, but there was still evidence of competition that conservative demand did much to emphasize. Large flake advanced from 70c. per pound in January to 73c. reached in April. Prices remained stable at that figure during May and June. In July sellers did business at 72c. Also in August. The pinch in stocks was felt keenly in September; low supply everywhere was responsible for a rise in spot quotations to the basis of 90c. and that was the market until late in December competition caused by light demand made the market 85c. Small flake was 50c. per pound in January. Declines were moderate, but very steady and quotations were presently established at 44c. per pound in July. That was low for the year. In August reaction to 46c. was noted and in September the shortage in supply supported a severe rise to the basis of 55c. per pound. The price held strong for the balance of the year.

Nux vomica was firm at 5c. per pound until September, when the primary market was advanced due to conservative supplies alone being available. The local market was raised to 6c. and the market remained strong but not excessively active for the balance of the year at that price.

Roots

Features in this market group included scarcity of 7-percent jalap, over-production of golden seal, low stocks of orris, liquidation of high prices for rhubarb and sarsparilla, and a return of senega prices to a basis nearer to normal. Reports of a short valerian crop were noted, but set aside later on when offerings came in ample numbers at very low prices after many merchants had contracted at comparatively high levels. The price trend of many materials was downward owing to the exceptionally high values reached early in the year under the expanded consumption caused mainly by the stimulus given to general trade by the influenza.

Aconite root declined more or less steadily throughout the year. The market in the first quarter of the year was 21c. per pound. In the second quarter it was 20c. From July through October offerings were made freely at 19c. During the last two months of the year the market was 18c. and comparatively easy thereat.

Aletris was firm early in the year at 37c. per pound, demand having been very good during January and February. In March 36c. was named as the market and was continued as the market price until some time in September, when 35c. was done. It continued to be done during the rest of the year. The crop collection was declared to have been fairly satisfactory.

Bloodroot strengthened as the year progressed. The opening price was 17c., but in March 18c. was established, with stocks showing shrinkage. To the end of July quotations fluctuated between 17½c. and 18c., according to seller and size of order. Then the market became firmer at 18c. and during August, September and October conditions of strength prevailed. The probability of higher levels was confirmed in November, when high for the year was reached at 19c. and continued firm to the end of the year.

Stocks of colombo were light at the beginning of the year and the maintenance of firm prices at 20c. per pound formed the feature of the early part of the period. It may be recalled that prices had been advanced from 5c. to the basis of 20c. in the previous year. From February through June 18c. was done, supplies showing betterment abroad and spot sellers being more disposed toward competition. July business was written easily at 16c. From August through November the market held at that position, but in December short stocks had been entirely relieved and the result was a severe break to 13c. as the low and closing price for the year.

Price history of golden seal was twofold. The market advanced from January to July. It then declined severely and closed the year at its lowest point. The overproduction of this article, plus liquidation of stocks held by an estate, were elements contributory to the decline of values. Quotations in January, February, March and April were $3.25 per pound, a well-stabilized market. In May quotations were shaded to $3.20, but in the next month $3.40 was established and maintained on export demand. The position was short lived. Late in July quotations were back to $3.25 and remained for August and September. The decline was resumed in October and during that month values receded from $3.10 to $2.75 per pound. November business was done at $2.75, but December quotations were the low for the year, being $2.70 in an exceptionally dull market.

Contrary to the experience in many years, prices for ipecac declined in the early portion of the year and then advanced sharply in September, holding steady at a comparatively high level until December, when a slight reaction came. Rio ipecac in January was priced at $2.70 and then $3.50 per pound. The latter quotation continued in February. In March, prices receded to $3.10, and in April, $2.90 was reached. May quotations were stable at $2.90. In June they were reduced first to $2.80 and then to $2.75, the latter price continuing through July. The advancing market started in August when sales at $2.75 were followed by others at $2.85. Scarcity of stocks and good demand in September forced quotations to rise from $2.85 to the basis of $4 with offerings very small. During October, November, and a part of December $4 was the market. The general slump in business that came in that month brought quotations down to $3.90 as a closing figure.

Collection of 7 percent jalap root was abandoned in Mexico during 1929. This compelled consumers to turn to the higher test root, which was obtainable only at substantially higher levels. In January and February 7 percent root was priced at 19c. per pound. In March, 20c. was done. April brought the first suggestion of difficulty in obtaining replacements of the low test goods. Quotations were raised from 20c. per pound to the basis of 24c., the latter quotations tending to select as a basis the fact that in the future only high test root was likely to be shipped from Mexico. However, 7 percent root was still offered during May, at 24c., and during June at 23c. and then at 22c. In July, quotations were jacked to 25c. In August, the pinch of low stocks was felt and eventually prices were advanced from 27c., low for the month, to 33c. high, with the statement that only higher test root was obtainable. In September, quotations were raised from 33c. to the basis of 40c., but in October, a more stable position for high test root was established at 35c. That was the market during the balance of the year.

The subnormal crop of orris in 1928 continued to affect prices obtained for the article in 1929. Furthermore, no relief from underproduction was expected short of another crop and, probably, not until 1931 was it expected to again provide an ample supply of material. Florentine root began the year at 20c. per pound, but in February quotations were up to 26c., and very strong. During March, April, May and June quotations were 26c., but stocks shrank steadily until in the last named month the price was nominal, supplies being reported exhausted. During the next three months 30c. was quoted, with only occasional transactions recorded. Stocks were somewhat better in November and a firm price, strongly maintained, was named at 27c. Verona root advanced from 14c. to 17c. during January. In February the market was up to 22c., which prevailed in March and April, too. The market advanced to 23c. in May, and to 28c. in July, being the result of shortage in Florentine root as well as very low supplies of the Verona article. August business was done at 30c., high for the year. In September and October 26c. was the market, and in November and December, a firm market was maintained regardless of decreased demand. quotations being 25c.

Declines in prices for rhubarb came in the first six months of the year. The market opened in January at 39c. and closed at 37c., continued in February and March. In April the decline was resumed and quotations eventually came to 36c. It was extended in May when sellers bid the market down from 36c. to 33c. and bought sparingly at both ends of the range. Quotations at 32c. came in July. That was the market until December when a sharp break brought the closing price at 26c. per pound, which was low for the year.

Decline in the price for Mexican sarsaparilla root was from 50c., quoted in January, to 22c., reached in December. The downward trend was due to the shipment of a quality of root which reduced the numbers of rejections by the Department of Agriculture. January found quotations advancing from 30c. per pound to a high of 40c. February business was written at both 40c. and 42c. per pound. Short stocks pinched values to 50c. following sales at 44c. made in March. April quotations began at 50c., but were soon slaughtered to 35c. when lower priced root reached here in a condition permitting the release of ample quantities by the Department of Agriculture. Some attempt to ship clean root had been made and proved successful in that shortage was relieved here. By the end of June the market was down to 29c. In July it broke to 26c., which was the market in August, September and October. Further arrivals showing a more favorable cost permitted spot dealers to reduce quotations in November, establishing 23c. In December 22c. per pound was reached, being low for the year.

The period of high prices for senega was broken in 1929, though the declines during the collection season failed to bring quotations down to levels prevailing in the period 1923-1926, when they had been exceptionally favorable. The advance had been the result of co-operative endeavors by the very few number of senega factors in Winnipeg; maintainence of prices was the touchstone that had brought about very high quotations. The high rates determined certain New York factors to seek independent supplies in Canada, and finally the efforts made brought a portion of success. Quotations in New York were $1.25 per pound during the period January through May. In June new crop began to affect the market and the efforts to break the co-operative combine began to take effect. Quotations dropped from $1.20 to $1.15. By the close of July they were down to $1.05. August was stationary at $1. September found the decline resumed and offerings were made at 95c. by the end of the month. October was stabilized at 95c. November quotations came out at 95c. and then 90c. The latter figure prevailed throughout December and was low for the year.

Reports received from Europe during crop season last year declared for a reduced output and were accompanied by high prices. They were maintained long enough to make some New York dealers cover a liberal part of their requirements at comparatively high figures. Subsequently the shippers in Belgium came through with large offerings at very low prices. Many here were stuck with merchandise that showed a substantial loss on every sale after the decline abroad. Quotations on spot in January-March were 24c. per pound. In April and a part of June they were 23c., but by the end of the latter month the quotations were down to 22c. The market was stable at 22c. in June. In July 21c. was done. August business was proposed at 20c. That was low for the year. In September the alleged short crop news was spread here. The spot quotations were jumped to 24c. in October, and to 25c. in November. Expectations for a bull market were ruined when, in December, arrival of low cost primary market stocks, of excellent quality, brought values down to the very easy basis of 21c.

Buyers Prefer

"O-P-D"

Market Information

because it is

Definite and

Accurate

Price Trends

Price trends over the year in forty typical botanical drugs, twenty domestic and twenty foreign, were as follows:—

	Jan. 1.	Apr. 1.	July 1.	Dec. 31.
Aletris root	$0.37	$0.36	$0.36	$0.35
Arnica flowers	1.00	.80	.80	.33
Balm of Gilead	.35	.35	.35	.35
Belladonna leaves	.16	.17	.16	.17
Belladonna root	.19	.18	.18	.18
Black haw, root bark	.28	.27	.26	.26
Bloodroot	.17	.18	.17½	.19
Buchu leaves	.39	.38	.35	.39
Cascara sagrada bark	.13	.13	.14	.14
Chamomile flowers, Hungarian	.25	.23	.21	.22
Cinchona quills	.58	.58	.58	.53
Clover tops	.11	.12	.10	.10
Cottonroot bark	.14½	.12	.13	.13⅛
Cramp bark, genuine	.45	.35	.35	.35
Deer tongue leaves	.10	.10	.09	.09
Elder flowers	.19	.26	.35	.45
Elm bark, select	.23	.27	.30	.35
Ergot, Spanish	.90	.85	.65	.68
Golden seal root	3.25	3.25	3.40	2.60
Henbane leaves	.18	.19	.18	.15
Insect powder, closed	.42	.42	.44	.38
Jaborandi leaves	.11	.11	.11	.21
Jalap root	.19	.20	.22	.35
Kola nuts	.13	.13	.14	.14
Lobelia herb	.14	.13	.12	.11
Lycopodium	.75	.63	.65	.60
Mandrake root	.11	.11	.11	.11
Manna flake, large	.70	.73	.73	.85
Rhubarb root	.39	.37	.33	.26
Sage leaves, Greek	.03½	.03½	.03½	.03¼
Sarsaparilla, Mex.	.30	.50	.29	.22
Sassafras bark, select	.24	.24	.23	.22
Senega root	1.25	1.25	1.15	.90
Senna leaves, T. V., No. 3	.07½	.07	.07	.07½
Soap bark, whole	.13	.15	.12	.11
Stramonium leaves	.17	.15	.15	.16
Uva ursi	.06	.06	.05¾	.05¾
Valerian root, USP.	.24	.23	.22	.21
Wahoo root, bark	.25	.25	.25	.25
Wild cherry bark, thin natural	.07½	.10	.08	.07½

Summary

	1929.	1928.	1927.
Advanced	8	12	17
Reduced	25	21	21
Unchanged	7	7	2

Botanical Drugs: Record of Prices

Balsams

Copaiba, Para

October 18, 1871, the price was 77½c. to 80c.; 1881, 52½c. to 54c.; 1891, 52¼c. to 55c.; 1901, 45c. to 50c.; 1911, 60c. to 85c.; 1913, 48c. to 50c.; 1919, March, 75c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.45	$0.45	$0.31	$0.31
February	.48	.44	.31	.31
March	.44	.44	.31	.31
April	.44	.42	.31	.30
May	.42	.42	.31	.30
June	.39	.39	.31	.31
July	.39	.37	.31	.31
August	.37	.37	.31	.31
September	.33	.33	.31	.31
October	.33	.32	.31	.31
November	.32	.32	.31	.31
December	.32	.31	.31	.31
Year	.48	.31	.31	.30

Copaiba, South American

October 18, 1871, the price was 77½c. to 80c.; 1881, 52½c. to 54c.; 1891, 60c.; 1901, 35c. to 40c.; 1911, 38c. to 45c.; 1913, 44c. to 48c.; 1918, January, 97½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.50	$0.48	$0.33	$0.33
February	.48	.47	.33	.33
March	.47	.47	.33	.33
April	.47	.46	.33	.32
May	.46	.46	.33	.32
June	.42	.42	.33	.33
July	.40	.38	.33	.33
August	.38	.38	.33	.33
September	.35	.35	.33	.33
October	.35	.34	.33	.33
November	.34	.33	.33	.33
December	.33	.33	.33	.32
Year	.50	.33	.33	.32

Fir, Canada

November 22, 1871, the price was $3 to $3.50; October 18, 1881, $2.25; 1891, $1.70 to $1.90; 1901, $3.65 to $3.75; 1911, $4.10 to $4.25; 1913, $9.50 to $10; 1920, April, $16.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$13.00	$12.00	$12.00	$12.00
February	13.00	13.00	12.00	12.00
March	13.00	13.00	12.00	11.75
April	13.00	12.50	11.75	11.75
May	12.50	12.00	11.75	11.00
June	12.00	12.00	11.00	11.00
July	12.00	12.00	11.00	11.00
August	12.00	12.00	11.00	11.00
September	12.00	12.00	11.00	11.00
October	12.00	12.00	11.00	11.00
November	12.00	12.00	11.00	11.00
December	12.00	12.00	11.00	10.50
Year	13.00	12.00	12.00	10.50

Fir, Oregon

March 26, 1873, the price was $3.50; October 18, 1881, nominal; 1891, $1 to $1.10; 1901, 75c. to 80c.; 1911, 80c. to 90c.; 1913, $1.30 to $1.50; 1919, December, $1.90.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.50	$1.50	$1.00	$1.00
February	1.50	1.50	1.00	1.00
March	1.50	1.45	1.00	1.00
April	1.45	1.00	1.00	1.00
May	1.00	1.00	1.00	1.00
June	1.00	1.00	1.00	1.00
July	1.05	1.00	1.00	1.00
August	1.00	1.00	1.00	1.00
September	1.00	1.00	1.00	1.00
October	1.00	1.00	1.00	1.00
November	1.00	1.00	1.00	1.00
December	1.00	1.00	1.00	.98
Year	1.50	1.00	1.00	.98

Peru

October 18, 1871, the price was $3.00; 1881, $2.75 to $3; 1891, $1.20 to $1.40; 1901, $1.30 to $1.40; 1911, $1.50 to $1.90; 1913, $1.50 to $1.60; 1920, February, $5.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.65	$1.65	$1.70	$1.70
February	1.65	1.65	1.90	1.80
March	1.65	1.65	2.05	1.90
April	1.65	1.65	2.05	1.70
May	1.75	1.65	1.95	1.95
June	1.75	1.72½	1.95	1.95
July	1.75	1.72½	1.95	1.95
August	1.72½	1.72½	1.95	1.90
September	1.72½	1.72½	1.90	1.90
October	1.72½	1.72½	1.90	1.90
November	1.72½	1.70	1.90	1.90
December	1.70	1.70	1.90	1.80
Year	1.75	1.65	2.05	1.70

Tolu

October 18, 1871, the price was 80c.; 1881, 65c. to 70c.; 1891, 27c. to 30c.; 1901, 33c. to 35c.; 1911, 50c. to 60c.; 1913, 80c. to 85c.; 1919, October, $1.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.00	$1.00	$1.15	$1.10
February	1.00	1.00	1.15	1.15
March	1.00	.93	1.15	1.15
April	.93	.93	1.20	1.15
May	.95	.93	1.10	1.10
June	.95	.90	1.10	1.10
July	1.00	.90	1.10	1.10
August	1.00	1.00	1.10	1.10
September	1.00	1.00	1.10	1.10
October	1.00	1.00	1.10	1.10
November	1.05	1.00	1.10	1.10
December	1.10	1.00	1.20	1.10
Year	1.10	.90	1.20	1.10

Barks

Black Haw Root

Decmeber 20, 1897, the price was 7½c. to 8½c.; October 18, 1901, 10½c. to 12c.; 1911, 19c. to 20c.; 1913, 16c. to 18c.; 1918, December, 65c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.29	$0.29	$0.28	$0.28
February	.30	.29	.28	.28
March	.30	.30	.27	.27
April	.30	.28	.27	.27
May	.28	.28	.27	.27
June	.28	.28	.26	.25
July	.28	.28	.25	.25
August	.28	.28	.25	.25
September	.27	.26	.25	.25
October	.27	.27	.25	.25
November	.27	.27	.25	.25
December	.28	.27	.25	.25
Year	.30	.26	.28	.2

Cinchona, Red, Short, Quills

November 22, 1871, the price was 90c. to $1; October 18, 1881, 15c. to $1.75; 1891, 25c. to 35c.; 1901, 20c to 25c.; 1911, 18c. to 20c.; 1913, 20c. to 28c.; 1918, May, $1.25.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.58	$0.58	$0.58	$0.58
February	.58	.58	.58	.58
March	.58	.58	.58	.58
April	.58	.58	.58	.58
May	.58	.58	.58	.58
June	.58	.58	.58	.58
July	.58	.58	.58	.58
August	.58	.58	.58	.58
September	.58	.58	.52	.52
October	.58	.58	.52	.52
November	.58	.58	.52	.52
December	.58	.58	.53	.52
Year	.58	.58	.58	.52

Cascara Sagrada, New Crop

March 31, 1880, the price was 40c. to 50c.; October 18, 1891, 5c. to 6c.; 1901, 5c. to 7c.; 1911, 9c. to 10½c.; 1913, 7¾c. to 10c.; 1918, September, 19c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.13½	$0.13½	$0.13	$0.13
February	.13½	.13	.13	.13
March	.13	.13	.13	.13
April	.13	.13	.14	.14
May	.13	.13	.14	.14
June	.13	.13	.14	.14
July	.13	.13	.14	.14
August	.13	.13	.13	.13
September	.13	.13	.13	.13
October	.13	.13	.13	.13
November	.13	.13	.13	.13
December	.13	.13	.13	.13
Year	.13½	.13	.14	.13

Condurango

November 22, 1871, the price was $6 to $8; October 18, 1896, 18c.; 1901, 14c. to 16c.; 1911, 17c. to 18c.; 1913, 12½c. to 14c.; 1917, September, 14c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.13	$0.13	$0.13½	$0.13½
February	.14	.14	.14	.13½
March	.14	.13	.15	.15
April	.14	.14	.15	.14½
May	.14	.14	.14½	.14½
June	.14	.13½	.14½	.14
July	.13	.13	.14	.14
August	.13	.13	.14½	.14
September	.14	.14	.14½	.14½
October	.14	.14	.14½	.14½
November	.14	.14	.14½	.14½
December	.15	.13½	.14½	.14½
Year	.15	.13	.15	.13½

Cottonroot

August 25, 1886, the price was 8c. to 9c.; October 18, 1881, 8c. to 9c.; 1906, 8½c. to 10c.; 1911, 22c. to 23c.; 1913, 6c. to 7c.; 1920, August, 80c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.12	$0.12	$0.14½	$0.14½
February	.13	.13	.14½	.14
March	.13	.13	.12	.12
April	.13	.12	.12	.12
May	.12	.12	.13	.12½
June	.13	.11½	.13	.13
July	.11½	.11½	.13	.13
August	.13	.11½	.14	.13
September	.13	.13	.14	.14
October	.14½	.14½	.14	.14
November	.14½	.14½	.14	.14
December	.14½	.14½	.14	.13
Year	.14½	.11½	.14½	.12

Elm, Selected, Bundles

February 18, 1874, the price was 16c.; October 8, 1881, 12½c. to 14c.; 1891, 12½c. to 14c.; 1901, 12c.; 1911, 17c. to 20c.; 1913, 7c. to 21c.; 1920, October, 90c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.24	$0.24	$0.23	$0.23
February	.25	.25	.23	.23
March	.26	.26	.23	.23
April	.26	.26	.28	.27
May	.26	.25	.30	.28
June	.23	.23	.30	.30
July	.23	.23	.30	.30
August	.24	.23	.32	.30
September	.24	.24	.35	.35
October	.25	.24	.35	.35
November	.25	.25	.35	.35
December	.23	.23	.35	.33
Year	.26	.23	.35	.23

Lemon Peel

October 18, 1911, the price was 5c. to 6c.; 1913, 6½c. to 7c.; 1918, January, 10c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09½	$0.09½	$0.09½	$0.09½
February	.09½	.09½	.09½	.09½
March	.09½	.09½	.11	.09½
April	.09½	.09½	.11	.09½
May	.09½	.09½	.09½	.09½
June	.09½	.09½	.09½	.09½
July	.09½	.09½	.09½	.09½
August	.09½	.09½	.09½	.09
September	.11	.09½	.09	.09
October	.11	.11	.09	.09
November	.11	.11	.09	.09
December	.11	.09½	.09	.09
Year	.11	.09½	.11	.09

Orange Peel, Bitter Curacao

November 22, 1871, the price was 8c. to 9c.; October 18, 1881, 13c. to 14c.; 1891, 4½c. to 10c.; 1901, 3c. to 4c.; 1911, 4c. to 5c.; 1913, 4c. to 5c.; 1919, August, 21c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09	$0.09	$0.10	$0.10
February	.09	.09	.10	.10
March	.09	.09	.11	.11
April	.11½	.09	.10	.10
May	.11½	.11	.10	.10
June	.11	.11	.10	.10
July	.11	.11	.11	.10
August	.11	.10½	.12	.11
September	.10½	.10½	.11	.11
October	.10½	.10	.11	.11
November	.10	.10	.11	.11
December	.10	.10	.11	.11
Year	.11½	.09	.12	.10

Prickly Ash Bark

April 3, 1878, the price, crushed, was 13c.; October 18, 1881, 10c. to 16c.; 1891, 9c. to 10c.; 1901, 8c. to 10c.; 1911, 28c. to 35c.; 1916, 14c. to 16c.; 1920, December, 28c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.13½	$0.14	$0.14
February	.15	.15	.14	.14
March	.15	.15	.15	.15
April	.15	.15	.15	.15
May	.15	.15	.15	.15
June	.15	.15	.15	.15
July	.15	.15	.15	.15
August	.15	.15	.15	.13½
September	.15	.15	.13½	.13½
October	.15	.14	.13½	.13½
November	.14	.14	.13½	.13½
December	.14	.14	.13	.13
Year	.15	.13½	.15	.13

Sassafras, Ordinary

November 22, 1871, the price was 5c. to 5½c.; October 18, 1881, 6c. to 6½c.; 1891, 8c. to 10c.; 1901, 6½c. to 10c.; 1911, 12c. to 14c.; 1913, 11c. to 13c.; 1919, December, 49c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.15	$0.14	$0.14
February	.15	.15	.14	.14
March	.15	.15	.14	.14
April	.15	.15	.14	.14
May	.15	.15	.14	.14
June	.15	.14	.13½	.13½
July	.14	.14	.14	.14
August	.14	.14	.13½	.13
September	.16	.14	.13	.13
October	.16	.14	.13	.13
November	.14	.14	.13	.12
December	.14	.14	.12	.12
Year	.16	.14	.14	.12

Soapbark, Whole

April 2, 1878, the price was 8c.; October 18, 1881, 4½c. to 6½c.; 1891, 8½c. to 9c.; 1901, 3½c. to 4c.; 1911, 6c. to 6½c.; 1913, 8½c. to 9½c.; 1919, August, 16c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.14	$0.14	$0.13	$0.13
February	.14	.14	.13	.13
March	.14	.13	.15	.15
April	.13	.13	.15	.12
May	.13	.13	.12	.12
June	.13	.13	.12	.12
July	.13	.13	.12	.12
August	.13	.13	.12	.12
September	.13	.13	.12	.12
October	.13	.13	.12	.12
November	.13	.13	.12	.12
December	.13	.13	.11	.11
Year	.14	.13	.15	.11

Soapbark, Crushed

April 2, 1878, the price was 16c.; October 18, 1881, 8c. to 8½c.; 1891, 9c. to 10c.; 1901, 5c. to 6c.; 1911, 7c. to 7½c.; 1913, 10c.; 1919, August, 23c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.16	$0.16	$0.15½	$0.15½
February	.16	.16	.15½	.15½
March	.16	.16	.16	.16
April	.16	.15	.16	.13½
May	.15½	.15	.13½	.13½
June	.15	.15	.13½	.13½
July	.15	.15	.13½	.13½
August	.15	.15	.13¼	.13
September	.15½	.15	.13	.13
October	.15½	.15½	.13	.13
November	.15½	.15½	.13	.12
December	.15½	.15½	.12	.12
Year	.16	.15	.16	.12

Soapbark, Cut and Sifted

April 2, 1878, the price was 3c.; October 22, 1886, 6c. to 7c.; 1911, 8c. to 8½c.; 1913, 10c.; 1920, May, 26c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.18	$0.18	$0.14½	$0.14½
February	.18	.18	.14½	.14½
March	.17½	.15	.16½	.16½
April	.15	.15	.15½	.13½
May	.15½	.15	.13½	.13½
June	.15½	.15½	.13½	.13½
July	.15½	.15½	.13½	.12½
August	.15½	.15½	.12½	.11½
September	.15½	.15½	.12	.11½
October	.15½	.15½	.12	.12
November	.15½	.15½	.12	.12
December	.14½	.14½	.12	.12
Year	.18	.14½	.16½	.11½

Wahoo Root

December 20, 1897, the price was 19c. to 20c.; October 18, 1901, 16c. to 20c.; 1911, 40c. to 42c.; 1913, 36c. to 50c.; 1920, December, 90c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.58	$0.58	$0.55	$0.55
February	.58	.58	.55	.55
March	.58	.58	.55	.54
April	.58	.56	.52	.48
May	.56	.54	.48	.48
June	.54	.52	.48	.48
July	.52	.52	.48	.48
August	.52	.52	.50	.48
September	.52	.52	.50	.50
October	.55	.52	.50	.50
November	.55	.55	.50	.50
December	.55	.55	.50	.48
Year	.58	.52	.55	.48

Wild Cherry, Thin, Natural

April 28, 1875, the price was 7c.; October 18, 1881, 9c.; 1901, 7½c.; 1911, 9c.; 1913, 9c.; 1919, January, 35c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07½	$0.07½	$0.11	$0.07½
February	.07⅞	.07½	.11	.11
March	.08	.08	.10	.10
April	.08	.07½	.10	.08
May	.07½	.07½	.08	.08
June	.07½	.07½	.08	.08
July	.07½	.07½	.08	.08
August	.07½	.07½	.08	.07½
September	.07½	.07½	.07½	.07½
October	.07½	.07½	.07½	.07½
November	.07½	.07½	.07½	.07½
December	.07½	.07½	.07½	.07½
Year	.08	.07½	.11	.07½

Beans

Calabar

February 16, 1881, the price was 40c.; October 18, 1881, 40c.; 1891, 16c. to 18c.; 1901, 8c. to 12c.; 1911, 37c. to 60c.; 1913, 25c. to 30c.; 1918, October, 75c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.22	$0.22
February	.25	.23	.22	.22
March	.23	.23	.22	.22
April	.23	.23	.22	.22
May	.23	.23	.22	.22
June	.23	.23	.22	.22
July	.23	.23	.22	.22
August	.23	.23	.22	.20
September	.23	.23	.20	.20
October	.23	.23	.20	.20
November	.23	.22	.18½	.18½
December	.22	.22	.18½	.18½
Year	.25	.22	.22	.18¼

Tonka, Angostura

November 22, 1871, the price was 55c. to 60c.; October 18, 1881, $2.50 to $3.25; 1891, $1.80 to $2.20; 1901, 80c. to 85c.; 1911, $5.25 to $5.50; 1913, $1.75 to $2; 1919, July, $1.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.75	$1.75	$1.85	$1.85
February	1.75	1.75	1.85	1.85
March	1.75	1.65	1.85	1.85
April	1.65	1.65	1.85	1.85
May	1.65	1.65	1.85	1.85
June	1.65	1.65	1.85	1.85
July	1.65	1.65	1.85	1.85
August	1.65	1.65	1.85	1.85
September	1.65	1.65	1.85	1.85
October	1.65	1.65	1.85	1.85
November	1.65	1.65	1.85	1.85
December	1.85	1.65	1.85	1.65
Year	1.85	1.65	1.85	1.65

Vanilla, Bourbon, Whole

April 14, 1880, the price was $5 to $8; October 18, 1881, $6 to $10; 1891, $3 to $6; 1901, $4.75 to $8.50; 1911, $3.85 to $4.50; 1913, $3 to $3.75; 1919, August, $3.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$2.00	$2.00	$1.65	$1.65
February	2.10	2.00	1.60	1.60
March	2.10	1.90	1.60	1.40
April	1.90	1.75	1.40	1.40
May	1.75	1.75	1.40	1.40
June	1.85	1.85	2.00	1.85
July	1.85	1.85	2.00	2.00
August	1.85	1.75	2.00	2.00
September	1.75	1.75	2.15	1.85
October	1.65	1.65	1.85	1.85
November	1.65	1.65	1.85	1.85
December	1.65	1.65	1.85	1.85
Year	2.10	1.65	2.15	1.40

Thirty Years' Prices

	Per pound	
	H.	L.
1929	$2.15	$1.40
1928	2.10	1.65
1927	3.00	1.75
1926	4.00	2.50
1925	9.50	2.75
1924	12.00	6.00
1923	6.00	2.75
1922	3.00	2.75
1921	2.75	1.50
1920	3.00	1.75
1919	2.85	2.25
1918	2.75	2.00
1917	2.50	2.00
1916	2.75	2.50
1915	3.50	2.25
1914	4.50	2.75
1913	3.10	2.75
1912	4.50	3.00
1911	3.75	2.75
1910	3.00	2.75
1909	3.00	1.75
1908	3.00	1.50
1907	3.00	1.25
1906	1.50	1.00
1905	1.50	1.00
1904	1.50	1.50
1903	2.50	1.50
1902	3.00	2.50
1901	4.75	3.00
1900	4.50	4.00

Vanilla, Mexican, Whole

November 22, 1871, the price was $14 to $16; October 18, 1881, $5 to $15; 1891, $4 to $8; 1901, $8 to $13.50; 1911, $4 to $5; 1913, $3.75 to $5; 1917, April, $5.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.50	$3.25	$3.25	$3.25
February	3.50	3.50	3.25	3.25
March	3.50	3.50	3.50	3.25
April	3.50	3.25	3.25	3.25
May	3.25	3.25	3.25	3.25
June	3.50	3.25	3.25	3.25
July	3.50	3.50	3.25	3.25
August	3.50	3.50	3.25	3.25
September	3.50	3.25	3.50	3.25
October	3.00	3.00	3.50	3.50
November	3.00	3.00	3.50	3.50
December	3.25	3.25	3.50	3.50
Year	3.50	3.00	3.50	3.25

Thirty Years' Prices

	Per pound	
	H.	L.
1929	$3.50	$3.25
1928	3.50	3.00
1927	4.25	3.25
1926	8.75	4.50
1925	11.00	6.75
1924	13.00	10.50
1923	11.00	8.50
1922	12.00	7.50
1921	7.00	3.50
1920	4.50	3.75
1919	4.50	4.25
1918	4.75	4.25
1917	5.00	4.50
1916	5.00	3.75
1915	3.75	2.50
1914	5.00	3.50
1913	4.00	3.62½
1912	5.00	3.50
1911	4.00	2.75
1910	3.37½	2.75
1909	3.25	2.75
1908	3.25	3.00
1907	4.25	2.75
1906	2.75	2.75
1905	3.59	2.75
1904	5.00	3.75
1903	6.50	5.00
1902	6.75	4.75
1901	9.00	6.75
1900	11.00	9.00

Berries

Cubeb XX

January 12, 1881, the price was 25c.; October 18, 1881, $1; 1891, 85c.; 1901, 14c. to 17c.; 1911, 44c. to 46c.; 1913, 40c. to 42c.; 1920, January $1.50.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.45	$0.45	$0.36	$0.36
February	.45	.45	.36	.36
March	.45	.45	.36	.36
April	.45	.38	.36	.36
May	.38	.38	.36	.36
June	.38	.38	.36	.36
July	.37	.37	.36	.36
August	.37	.37	.36	.36
September	.37	.37	.36	.36
October	.37	.37	.36	.36
November	.37	.36	.36	.36
December	.36	.36	.36	.36
Year	.45	.36	.36	.36

Cubeb, Powdered

October 18, 1871, the price was 35c.; 1881, $1.35; 1891, 80c.; 1901, 14c. to 17c.; 1911, 44c. to 46c.; 1913, 40c. to 42c.; 1919, November, $1.45.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.45	$0.45	$0.40	$0.40
February	.45	.45	.40	.40
March	.45	.45	.40	.40
April	.45	.43	.40	.40
May	.43	.43	.40	.40
June	.43	.43	.40	.40
July	.42	.42	.40	.40
August	.42	.42	.40	.40
September	.42	.42	.40	.40
October	.42	.42	.40	.40
November	.42	.41	.40	.40
December	.41	.40	.40	.38
Year	.45	.40	.40	.38

Juniper

January 17, 1872, the price was 4½c. to 5c.; October 18, 1881, 3½c. to 4c.; 1891, 2½c. to 3c.; 1901, 2¾c. to 3c.; 1911, 3¾c. to 3¾c.; 1913, 4c. to 4½c.; 1919, 12c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.06½	$0.06½	$0.05½	$0.05½
February	.06½	.06½	.07	.06½
March	.06	.05¾	.07	.06½
April	.05¾	.05½	.07	.07
May	.05½	.05½	.07	.07
June	.05	.05	.07	.07
July	.05½	.05	.06½	.06½
August	.05½	.05¼	.06½	.06½
September	.05¼	.05¼	.06½	.06½
October	.05	.05	.06½	.06½
November	.05	.05	.06½	.06½
December	.05½	.05	.06½	.06½
Year	.06½	.05	.07	.05½

Flowers

Arnica

November 22, 1871, the price was 10c. to 11c.; October 18, 1881, 9c. to 10c.; 1891, 16c. to 18c.; 1901, 8½c. to 9½c.; 1911, 13c. to 14c.; 1913, 15c. to 16c.; 1917, April, $3.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.50	$1.45	$1.00	$1.00
February	1.45	1.45	1.00	.90
March	1.45	1.25	.90	.85
April	1.35	1.25	.80	.75
May	1.35	1.35	.85	.80
June	1.60	1.35	.80	.80
July	1.60	1.35	.78	.75
August	1.35	1.00	.65	.55
September	1.10	1.10	.55	.55
October	1.20	1.10	.50	.43
November	1.10	.95	.42	.38
December	1.00	.95	.38	.33
Year	1.60	.95	1.00	.33

Chamomile, Roman

October 18, 1871, the price was 20c. to 30c.; 1881, 14c. to 16c.; 1891, 20c. to 35c.; 1901, 18c. to 20c.; 1911, 27c. to 35c.; 1913, 21c. to 24c.; 1917, May, $1.35.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.21	$0.20	$0.50	$0.50
February	.20	.20	.50	.50
March	.20	.20	.50	.50
April	.20	.18	.45	.42
May	.18	.18	.42	.42
June	.18	.18	.40	.40
July	.18	.18	.39	.39
August	.18	.18	.45	.39
September	.23	.18	.44	.44
October	.22	.22	.44	.44
November	.42	.22	.47	.47
December	.48	.42	.75	.47
Year	.48	.18	.75	.39

Lavender, Ordinary

June 12, 1872, the price was 5c. to 6c.; October 18, 1881, 4c. to 5½c.; 1891, 3c. to 5c.; 1901, 4c. to 5c.; 1911, 7c. to 9c.; 1913, 10c. to 11c.; 1919, January 27c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.31	$0.31	$0.30	$0.30
February	.31	.30	.30	.30
March	.30	.30	.30	.30
April	.30	.30	.30	.25
May	.30	.30	.25	.25
June	.30	.30	.25	.25
July	.30	.30	.25	.25
August	.30	.30	.25	.25
September	.30	.30	.25	.25
October	.30	.30	.25	.25
November	.30	.30	.25	.25
December	.30	.30	.25	.25
Year	.31	.30	.30	.25

Insect Powder

May 29, 1872, the price was 55c. to 80c.; October 18, 1881, 40c. to 42c.; 1891, 17c. to 24c.; 1901, 15c. to 24c.; 1911, 14c. to 30c.; 1913, 22c. to 40c.; 1920, March, $1.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.34	$0.28	$0.42	$0.42
February	.39	.36	.42	.42
March	.36	.36	.42	.42
April	.36	.35	.44	.42
May	.33	.33	.44	.44
June	.33	.33	.44	.44
July	.38	.33	.44	.40
August	.38	.38	.40	.40
September	.42	.38	.40	.39
October	.42	.37	.39	.39
November	.37	.37	.39	.39
December	.37	.37	.39	.39
Year	.42	.28	.44	.39

Saffron, American

November 22, 1871, the price was $1.75 to $2; October 18, 1881, 40c.; 1891, 24c.; 1901, 14c. to 20c.; 1911, 30c. to 32c.; 1913, 60c. to 65c.; 1917, January, 75c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.30	$0.30
February	.35	.35	.30	.30
March	.35	.35	.32	.30
April	.35	.30	.32	.32
May	.30	.30	.32	.32
June	.30	.30	.32	.32
July	.30	.30	.32	.32
August	.30	.30	.32	.32
September	.28	.28	.32	.32
October	.28	.28	.32	.32
November	.30	.28	.32	.32
December	.30	.30	.32	.28
Year	.35	.28	.32	.28

Twenty Years' Prices

	Per pound	
	H.	L.
1929	$0.32	$0.28
1928	.35	.28
1927	.38	.35
1926	.40	.38
1925	.40	.40
1924	.60	.60
1923	1.40	.78
1922	1.50	1.05
1921	1.35	.68
1920	1.00	.33
1919	.40	.33
1918	.48	.39
1917	.75	.45
1916	2.00	.75
1915	1.25	.32
1914	.60	.35
1913	.45	.30
1912	.45	.33
1911	.33	.18
1910	.35	.18

Saffron, Spanish

November 22, 1871, the price was $13 to $14; October 18, 1881, $17 to $18; 1891, $9.50 to $11.50; 1901, $6.75 to $7; 1911, $10 to $11; 1913, $12.25 to $12.75; 1918, July, $16.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$12.50	$12.50	$11.25	$11.25
February	13.00	12.00	11.50	11.50
March	12.50	12.50	11.50	11.25
April	12.00	12.00	11.25	11.00
May	12.00	12.00	11.00	11.00
June	12.00	11.50	11.00	11.00
July	11.75	11.50	11.00	11.00
August	11.75	11.50	11.50	11.00
September	11.50	11.50	11.50	11.50
October	11.75	11.50	11.50	11.50
November	12.00	12.00	10.50	10.50
December	11.50	11.25	11.00	10.00
Year	13.00	11.25	11.50	10.00

Herbs and Leaves

Aconite Leaf

April 2, 1878, the price of powder was 20c. to 21c.; October 18, 1881, 8c. to 10c.; 1891, 10c. to 11c.; 1901, 9c. to 10c.; 1911, 7c. to 8c.; 1913, 7c. to 8c.; 1920, August, 70c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.11	$0.10	$0.12	$0.12
February	.11	.11	.12	.12
March	.11	.11	.12	.12
April	.11	.11	.12	.12
May	.11	.11	.12	.12
June	.11	.11	.12	.11
July	.11	.11	.12	.11
August	.11	.11	.12	.12
September	.11	.11	.12	.12
October	.12	.11	.12	.12
November	.12	.12	.12	.11
December	.12	.12	.11	.11
Year	.12	.10	.12	.11

Belladonna Leaf

April 2, 1878, the price of powder was 26c. to 27c.; October 18, 1881, whole, 14c. to 16c.; 1891, 11c. to 15c.; 1901, 14c. to 16c.; 1911, 14c. to 17c.; 1913, 16c.; 1918, February, $1.05.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.18½	$0.18½	$0.16	$0.16
February	.19	.18½	.17	.16
March	.19	.19	.17	.17
April	.19	.18	.17	.16
May	.18	.18	.16	.16
June	.18	.18	.16	.16
July	.18	.18	.16	.16
August	.18	.18	.16	.16
September	.18	.18	.18	.16
October	.18	.16	.19	.18
November	.16	.16	.19	.17
December	.16	.16	.17	.17
Year	.19	.16	.19	.16

Buchu Leaf, Short

November 22, 1871, the price of short was 15c. to 16c.; long, 24c. to 26c.; October 18, 1881, short, 18c. to 20c.; long, 47c. to 50c.; 1891, short, 11c. to 20c.; long, 65c.; 1901, short, 26c. to 28c.; long, 75c.; 1911, short, $1.10 to $1.15; long, 65c. to 70c.; 1913, short, $1.30 to $1.35; long, $1.30 to $1.35; 1920, short, June, $4; long, October, $3.30.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.47	$0.44	$0.39	$0.38½
February	.44	.44	.38½	.37
March	.50	.44	.38	.37
April	.45	.43	.40	.38
May	.43	.43	.36	.36
June	.42	.42	.35	.35
July	.42	.40	.34	.34
August	.40	.40	.34	.33
September	.40	.40	.45	.34
October	.40	.40	.45	.45
November	.40	.39	.45	.44
December	.39	.39	.44	.39
Year	.50	.39	.45	.33

Eighteen Years' Prices

	Per pound	
	H.	L.
1929	$0.45	$0.33
1928	.50	.39
1927	.53	.43
1926	.55	.45
1925	.80	.55
1924	.85	.73
1923	1.10	.85
1922	1.12	.85
1921	2.60	1.15
1920	4.00	2.35
1919	3.25	1.75
1918	2.60	1.15
1917	1.35	1.15
1916	1.30	1.15
1915	1.55	1.05
1914	1.85	1.30
1913	1.50	1.25
1912	1.65	.95

Cannabis Herb, Domestic, U.S.P.

May 8, 1899, the price was 14c. to 15½c.; October 18, 1901, 50c. to 55c.; 1911, $1.25 to $1.30; 1913, $1.45; 1918, January, $1.50.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.20	$0.20	$0.28	$0.28
February	.20	.20	.28	.28
March	.20	.20	.28	.27
April	.20	.20	.24	.21
May	.20	.20	.21	.21
June	.22	.20	.21	.21
July	.22	.22	.21	.20
August	.22	.22	.22	.22
September	.28	.22	.22	.22
October	.28	.28	.22	.22
November	.28	.28	.22	.22
December	.28	.28	.22	.22
Year	.28	.20	.28	.20

Deer Tongue Leaf

April 2, 1878, the price was 8c.; October 18, 1881, 7c. to 8c.; 1901, 3c. to 4c.; 1911, 8c. to 9c.; 1913, 7½c. to 8c.; 1918, February, 25c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.14	$0.10	$0.10
February	.14	.14	.10	.10
March	.14	.14	.10	.10
April	.14	.14	.10	.10
May	.14	.13	.10	.10
June	.13	.13	.10	.09
July	.13	.13	.09	.09
August	.13	.12	.09	.09
September	.12	.12	.09	.09
October	.10	.10	.09	.09
November	.10	.10	.09	.09
December	.10	.10	.09	.09
Year	.15	.10	.10	.09

Henbane Leaf

April 2, 1878, the price of powder was 22c.; October 18, 1881, whole, 12c. to 14c.; 1891, 10c.; 1901, 9c. to 12c.; 1911, 9c. to 10c.; 1913, 6½c. to 7c.; 1918, $2.10.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.21	$0.20	$0.18	$0.18
February	.20	.18	.18	.18
March	.19	.19	.19	.19
April	.19	.19	.19	.19
May	.19	.18	.19	.19
June	.18	.18	.18	.18
July	.18	.18	.18	.18
August	.18	.18	.18	.18
September	.18	.18	.18	.18
October	.18	.18	.18	.18
November	.18	.18	.18	.18
December	.18	.18	.18	.16
Year	.21	.18	.19	.16

Laurel Leaf, Italian

April 2, 1878, the price of ground was 10c.; October 18, 1881, whole, 3c. to 5c.; 1891, 3½c. to 4c; 1901, 3c. to 4c.; 1911, 3¼c. to 3½c.; 1913, 3½c. to 3¾c.; 1918, April, 16c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.04½	$0.04½	$0.04½	$0.04½
February	.04½	.04½	.04½	.04½
March	.04½	.04½	.04½	.04½
April	.04½	.04½	.04½	.04½
May	.04½	.04½	.06	.04½
June	.04½	.04½	.05¼	.05¼
*July	.04½	.04½	.05½	.05½
August	.04½	.04½	.05½	.05¼
September	.04½	.04½	.07	.05½
October	.04½	.04½	.07	.06
November	.04½	.04½	.05½	.05
December	.04½	.04½	.05	.05
Year	.04½	.04½	.07	.04½

* Prices from July through December are for Greek laurel; no more Italian was available.

Pennyroyal Herb

December 20, 1897, the price was 8½c.; October 18, 1901, 6½c.; 1911, 4c. to 5c.; 1913, 4c. to 5c.; 1918, January, 18c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08	$0.08	$0.07	$0.07
February	.08	.08	.07	.07
March	.06	.06	.07	.07
April	.06	.06	.07	.07
May	.06	.06	.07	.07
June	.06	.06	.07	.07
July	.06	.06	.07	.07
August	.06	.06	.07	.07
September	.06	.06	.07	.07
October	.07	.06	.07	.07
November	.07	.07	.07	.07
December	.07	.07	.07	.07
Year	.08	.06	.07	.07

Prince's Pine Herb

October 18, 1871, the price was 3½c. to 4c.; 1881, 8c. to 9c.; 1891, 8c.; 1901, 8c.; 1911, 8c. to 10c.; 1913, 8c. to 10c.; 1918, October, 50c.

	Per pound			
	1928.		1929.	
	H.	L.	H	L.
January	$0.15	$0.15	$0.15	$0.15
February	.15	.15	.15	.15
March	.15	.15	.15	.14½
April	.15	.14	.14½	.14½
May	.14	.14	.24	.14½
June	.15	.15	.26	.25
July	.15	.15	.28	.26
August	.15	.15	.28	.28
September	.15	.15	.28	.28
October	.15	.15	.40	.28
November	.15	.15	.40	.40
December	.15	.15	.40	.35
Year	.15	.14	.40	.14½

Sage Leaf, Greek

March 26, 1873, the price was 3½c. to 4c.; October 18, 1881, Italian, 2¼c. to 2½c.; 1891, Italian, 5½c. to 8c.; 1901, Italian, 3¾c. to 3¾c.; 1911, Italian, 3¼c. to 4c.; 1913, Greek, 3c. to 4c.; 1918, November, 36c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.03½	$0.03½	$0.03½	$0.03½
February	.03½	.03½	.03½	.03½
March	.03½	.03½	.03½	.03½
April	.03½	.03½	.03½	.03½
May	.03½	.03½	.03½	.03½
June	.03½	.03½	.03½	.03½
July	.03½	.03½	.03½	.03½
August	.03½	.03½	.03½	.03½
September	.03½	.03½	.03½	.03½
October	.03½	.03½	.03½	.03½
November	.03½	.03½	.03½	.03½
December	.03½	.03½	.03½	.03½
Year	.03½	.03½	.03½	.03½

Senna Leaf, Tinnevelly No. 3

October 18, 1871, the price was 16c.; 1881, 11c. to 15c.; 1891, 5c. to 18c.; 1901, 6¼c. to 14c.; 1911, 6c. to 12c.; 1913, 7c. to 9c.; 1919, November, 17c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07½	$0.07½	$0.07½	$0.07½
February	.07½	.07½	.07½	.07½
March	.07½	.07½	.07½	.07
April	.07½	.07½	.07	.07
May	.08	.07½	.07	.07
June	.08	.08	.07	.07
July	.08	.07½	.07	.07
August	.07½	.07½	.07	.07
September	.07½	.07½	.07½	.07
October	.07½	.07½	.07½	.07½
November	.07½	.07½	.07½	.07½
December	.07½	.07½	.07½	.07½
Year	.08	.07½	.07½	.07

Stramonium Leaf

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.18	$0.17½	$0.17	$0.15
February	.17½	.17½	.15	.15
March	.17½	.17½	.15	.15
April	.17½	.17½	.15	.15
May	.17½	.17½	.15	.15
June	.17½	.16	.15	.15
July	.16	.16	.15	.15
August	.18	.16	.15	.15
September	.18	.17½	.17	.15
October	.17½	.17½	.15	.15
November	.17½	.17½	.16	.16
December	.17	.17	.16	.16
Year	.18	.16	.17	.15

Uva Ursi Leaf

May 29, 1872, the price was 6c. to 7c.; October 18, 1881, 4c. to 5½c.; 1891, 5c. to 7c.; 1901, 3½c. to 5c.; 1911, 3¾c. to 4c.; 1913, 3½c. to 4c.; 1918, May, 24c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05½	$0.05½	$0.06	$0.06
February	.06¼	.05½	.06	.06
March	.06¼	.06	.06	.06
April	.06	.06	.06	.05¾
May	.06	.05½	.05¾	.05¾
June	.05½	.05½	.05½	.05½
July	.05½	.05½	.05¾	.05¾
August	.06	.06	.05½	.05½
September	.06	.06	.05¾	.05½
October	.06	.06	.05¾	.05¾
November	.06	.06	.05¾	.05¾
December	.06	.06	.05¾	.05¾
Year	.06¼	.05½	.06	.05½

Miscellaneous

Balm of Gilead

December 20, 1899, the price was 35c.; October 18, 1901, 32c.; 1911, 25c. to 26c.; 1913, 24c. to 26c.; 1929, March, $3.60.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.35	$0.35
February	.35	.35	.35	.35
March	.35	.35	.35	.35
April	.37	.37	.35	.35
May	.37	.28	.35	.35
June	.28	.28	.35	.35
July	.28	.28	.35	.35
August	.28	.28	.35	.35
September	.40	.28	.35	.35
October	.35	.35	.35	.35
November	.35	.35	.35	.35
December	.35	.35	.35	.35
Year	.40	.28	.35	.35

Ergot, Spanish

November 22, 1871, the price was 80c.; October 18, 1881, 60c. to 65c.; 1891, 38c. to 43c.; 1901, 42c. to 45c.; 1911, $1.25 to $1.30; 1913, $1.25 to $1.30; 1929, December, $5.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.45	$1.45	$0.90	$0.90
February	1.45	1.45	.95	.90
March	2.05	1.45	.95	.95
April	1.95	1.95	.85	.65
May	1.95	1.95	.65	.65
June	1.45	1.25	.62	.62
July	1.25	1 20	.65	.65
August	1.10	1.10	.62	.62
September	1.00	1.00	.62	.62
October	.90	.90	.62	.62
November	.90	.90	.62	.62
December	.90	.90	.62	.62
Year	2.05	.90	.95	.62

Lycopodium

February 25, 1874, the price was 70c.; October 18, 1881, 32c. to 34c.; 1891, 33c. to 36c.; 1901, 52c. to 54c.; 1911, 48c. to 50c.; 1913, 42c. to 44c.; 1921, February, $4.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.73	$0.73	$0.75	$0.73
February	.73	.73	.73	.70
March	.76	.73	.70	.65
April	.73	.70	.63	.63
May	.70	.70	.63	.63
June	.70	.68	.70	.65
July	.68	.68	.65	.64
August	.68	.68	.65	.65
September	.73	.68	.65	.65
October	.85	.85	.65	.65
November	1.00	.85	.65	.65
December	.78	.75	.65	.60
Year	1.00	.68	.75	.60

Manna, Flake

October 18, 1871, the price on large flake was $1.40; small flake, 83c. to 85c.; 1881, large flake, 95c. to $1; small flake, 38c. to 40c.; 1891, large flake, 75c. to 80c.; small flake, 30c. to 35c.; 1901, large flake, 80c. to $1; small flake, 30c. to 35c.; 1911, large flake, $1; small flake, 75c. to 80c.; 1913, large flake, 85c. to 90c.; small flake, 55c. to 57c.; 1919, large, April, $1.30; small, October, 1916, $1.65.

1928

	Per pound			
	Large.		Small.	
	H.	L.	H.	L.
January	$0.65	$0.65	$0.55	$0.55
February	.65	.65	.55	.55
March	.65	.65	.55	.55
April	.65	.65	.55	.55
May	.65	.65	.55	.55
June	.65	.65	.52	.50
July	.65	.65	.50	.48
August	.65	.65	.48	.48
September	.65	.65	.48	.48
October	.65	.65	.48	.48
November	.75	.65	.55	.48
December	.70	.70	.50	.50
Year	.75	.65	.55	.48

1929

	Per pound			
	Large.		Small.	
	H.	L.	H.	L.
January	$0.70	$0.70	$0.50	$0.50
February	.72	.70	.52	.50
March	.72	.72	.52	.52
April	.73	.73	.49	.48
May	.73	.73	.48	.46
June	.73	.73	.46	.45
July	.72	.72	.44	.44
August	.72	.72	.46	.46
September	.90	.72	.55	.46
October	.90	.90	.55	.55
November	.90	.90	.55	.55
December	.90	.85	.55	.55
Year	.90	.70	.58	.44

Nux Vomica, Buttons

November 22, 1871, the price for powder was 18c. to 21c.; October 18, 1881, 2½c. to 3c.; 1891, 3¼c. to 4½c.; 1901, 2¾c. to 3c.; 1911, 2½c. to 3c.; 1913, 2¾c. to 3c.; 1920, June, 18c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05	$0.05	$0.05	$0.05
February	.05	.05	.05	.05
March	.05	.05	.05	.05
April	.05	.05	.05	.05
May	.05	.05	.05	.05
June	.05	.05	.05	.05
July	.05	.05	.05	.05
August	.05	.05	.05	.05
September	.05	.05	.06	.06
October	.05	.05	.06	.06
November	.05	.05	.06	.06
December	.05	.05	.06	.06
Year	.05	.05	.06	.05

Tamarinds

July 20, 1881, the price was $1.75; October 18, 1881, $2; 1901, $2.05 to $2.25; 1911, $2.50 to $2.75; 1913, $2.45 to $2.50; 1919, November, $7.

	Per keg			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.75	$3.75	$3.75	$3.75
February	3.75	3.75	3.75	3.75
March	3.75	3.75	3.75	3.75
April	3.75	3.75	3.75	3.75
May	3.75	3.75	3.70	3.75
June	3.75	6.75	3.75	3.75
July	3.75	3.75	4.00	3.75
August	3.75	3.75	No stocks	
September	3.75	3.75	No stocks	
October	3.75	3.75	No stocks	
November	3.75	3.75	No stocks	
December	3.75	3.75	No stocks	
Year	3.75	3.75	No stocks	

Roots

Aconite, U.S.P.

February 25, 1874, the price was 14c.; October 18, 1881, 10c. to 12c.; 1891, 13c. to 15c.; 1901, 13c. to 14c.; 1911, 10½c. to 11c.; 1913, 3c. to 15c.; 1919, December, 90c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.23	$0.23	$0.21	$0.21
February	.23	.23	.21	.21
March	.22	.22	.21	.21
April	.22	.22	.20	.20
May	.22	.20	.20	.20
June	.20	.20	.20	.19
July	.20	.20	.19	.19
August	.20	.20	.19	.19
September	.21	.20	.19	.19
October	.21	.21	.19	.19
November	.21	.21	.18	.18
December	.21	.21	.18	.18
Year	.23	.20	.21	.18

Aletris

January 12, 1881, the price was 35c. to 40c.; October 18, 1881, 35c. to 40c.; 1901, 16c.; 1911, 20c. to 22c.; 1913, 20c. to 21c.; 1920, March, $1.25.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.37	$0.37
February	.40	.40	.37	.37
March	.40	.40	.36	.36
April	.40	.40	.36	.36
May	.38	.38	.36	.36
June	.37	.36	.36	.36
July	.36	.36	.36	.36
August	.36	.36	.36	.36
September	.38	.36	.36	.35
October	.37	.36	.35	.35
November	.37	.37	.35	.35
December	.37	.37	.35	.35
Year	.40	.36	.37	.35

Belladonna

December 22, 1875, the price was 18c.; October 18, 1881, 10c. to 12c.; 1891, 6c. to 12c.; 1901, 10c. to 11c.; 1911, 10½c. to 11c.; 1913, 9c. to 10c.; 1917, December, $4.50.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.19	$0.19	$0.19	$0.19
February	.19	.19	.19	.19
March	.21	.21	.18	.18
April	.21	.20	.18	.18
May	.20	.20	.18	.18
June	.20	.20	.18	.18
July	.20	.20	.18	.18
August	.20	.20	.18	.18
September	.20	.19	.18	.18
October	.19	.19	.18	.18
November	.19	.19	.16	.16
December	.19	.19	.16	.16
Year	.21	.19	.19	.16

Blood

April 28, 1875, the price of crushed was 10c.; October 18, 1881, 6c. to 6½c.; 1891, 4½c. to 6c.; 1901, 5c. to 6c.; 1911, 8c. to 8½c.; 1913, 8½c. to 9c.; 1918, November, 80c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.23	$0.22	$0.17	$0.17
February	.24	.23	.17	.17
March	.27	.24	.18	.18
April	.34	.28	.18	.18
May	.34	.19½	.18	.17½
June	.20	.19½	.17½	.17½
July	.19½	.18	.18	.17½
August	.18	.17½	.18	.18
September	.18	.17	.18	.18
October	.17½	.17½	.18	.18
November	.17½	.17½	.19	.19
December	.17½	.17½	.19	.19
Year	.34	.17	.19	.17

Colombo

November 22, 1871, the price was 13c. to 14c.; October 18, 1881, 9¼c. to 10c.; 1891, 5c. to 10c.; 1901, 8c. to 12c.; 1911, 8c. to 10c.; 1913, 6c. to 7c.; 1918, September, 30c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05½	$0.05	$0.20	$0.20
February	.05	.05	.18	.18
March	.09½	.05	.18	.18
April	.09½	.09	.18	.18
May	.10	.09	.18	.18
June	.10	.10	.18	.18
July	.10	.10	.18	.16
August	.10	.10	.16	.16
September	.12	.10	.16	.16
October	.12	.12	.16	.16
November	.20	.20	.16	.16
December	.20	.20	.16	.13
Year	.20	.05	.20	.13

Gentian

November 22, 1871, the price was 5½c. to 6c.; October 18, 1881, 4½c. to 4¾c.; 1891, 3¾c. to 4½c.; 1901, 4c. to 4½c.; 1911, 6c. to 6½c.; 1913, 6½c. to 6¾c.; 1918, November, 18c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09	$0.09	$0.09½	$0.09
February	.09	.09	.09½	.09½
March	.09	.09	.09½	.09½
April	.09	.09	.09½	.09½
May	.09	.09	.09½	.09½
June	.09	.09	.09½	.09½
July	.09	.09	.09½	.09½
August	.09	.09	.09½	.09½
September	.09½	.09½	.10	.09½
October	.09	.09	.10	.10
November	.09	.09	.09½	.09½
December	.09	.09	.09½	.09
Year	.09½	.09	.10	.09

Golden Seal

February 25, 1874, the price was 14c.; October 18, 1881, 15c. to 16c.; 1891, 24c. to 26c.; 1901, 55c. to 60c.; 1911, $5.25 to $5.50; 1913, $4.90 to $5; 1917, April, $5.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.75	$3.75	$3.25	$3.25
February	3.75	3.75	3.25	3.25
March	3.75	3.75	3.25	3.25
April	4.05	3.75	3.25	3.25
May	4.05	4.05	3.20	3.20
June	4.05	4.05	3.40	3.40
July	4.05	4.05	3.40	3.25
August	4.00	4.00	3.25	3.25
September	3.90	3.90	3.25	3.25
October	3.90	3.75	3.10	2.75
November	3.50	3.50	2.75	2.75
December	3.50	3.25	2.70	2.70
Year	4.05	3.25	3.25	2.70

Eighteen Years' Prices

	Per pound	
	H.	L.
1929	$3.25	$2.70
1928	4.05	3.25
1927	4.75	3.75
1926	5.70	4.50
1925	5.00	3.55
1924	3.70	3.40
1923	3.65	3.20
1922	3.60	3.00
1921	5.00	3.10
1920	6.50	4.85
1919	6.00	5.25
1918	5.35	4.90
1917	5.75	5.00
1916	5.50	4.25
1915	4.85	4.20
1914	4.90	4.20
1913	5.00	3.90
1912	5.25	4.00

Hellebore, White, Powdered

May 28, 1875, the price was 15c.; October 18, 1881, whole, 6c. to 7c.; 1891, 8c. to 12c.; 1901, 7c. to 7¼c.; 1911, 7½c. to 8c.; 1913, 10c. to 11c.; 1918, February, 24c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.11	$0.11	$0.11	$0.11
February	.11	.11	.11	.11
March	.11	.11	.11	.11
April	.11	.11	.11	.11
May	.11	.11	.11	.11
June	.11	.11	.11	.11
July	.11	.11	.11	.11
August	.11	.11	.11	.11
Sertember	.11	.11	.11	.11
October	.11	.11	.11	.11
November	.11	.11	.11	.11
December	.11	.11	.11	.11
Year	.11	.11	.11	.11

Ipecac, Cartagena

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.15	$3.05	$3.50	$2.65
February	3.05	3.05	3.50	3.50
March	2.90	2.90	3.10	3.10
April	2.90	2.45	3.10	2.90
May	2.45	2.15	2.90	2.90
June	2.35	2.35	2.80	2.75
July	2.50	2.35	2.75	2.75
August	2.70	2.50	2.85	2.75
September	2.70	2.70	4.00	2.85
October	2.65	2.65	4.00	4.00
November	2.65	2.50	4.00	4.00
December	2.65	2.45	4.00	3.90
Year	3.15	2.35	4.00	2.65

Ipecac, Rio

October 18, 1871, the price of Rio was $1.27½; 1881, $1.10 to $1.15; 1891, $2 to $2.15; 1901, $2.70 to $2.80; 1911, $2.25 to $2.30; 1913, $2.10; 1918, November, $4.75.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.40	$3.30	$3.50	$2.70
February	3.30	3.30	3.50	3.50
March	3.15	3.15	3.10	3.10
April	3.15	3.15	3.10	2.90
May	3.15	3.10	2.90	2.90
June	2.80	2.80	2.80	2.75
July	2.80	2.80	2.75	2.75
August	2.80	2.80	2.85	2.75
September	2.80	2.75	4.00	2.85
October	2.70	2.70	4.00	4.00
November	2.70	2.70	4.00	4.00
December	2.70	2.70	4.00	3.90
Year	3.40	2.70	4.00	2.70

Rio, Nineteen Years' Prices

	Per pound	
	H.	L.
1929	$4.00	$2.70
1928	3.40	2.70
1927	3.60	3.10
1926	4.50	3.00
1925	2.35	1.95
1924	2.35	1.80
1923	2.00	1.55
1922	1.90	1.35
1921	2.50	1.35
1920	3.50	2.50
1919	4.00	2.50
1918	4.75	3.00
1917	3.10	2.00
1916	2.65	2.55
1915	5.50	1.70
1914	2.00	1.42½
1913	2.20	1.75
1912	2.35	1.45
1911	2.30	1.75

Jalap

October 18, 1871, the price was 40c.; 1881, 18c. to 20c.; 1891, 50c. to 52½c; 1901, 12c. to 14c.; 1911, 33c. to 35c.; 1913, 15c. to 16c.; 1919, August, 80c.

	Per pound			
	1928.		1929.	
			U.S.P.	
	H.	L.	H.	L.
January	$0.16	$0.16	$0.19	$0.19
February	.16	.16	.19	.19
March	.16	.16	.20	.20
April	.16	.16	.24	.20
May	.19	.16	.24	.24
June	.20	.19	.23	.22
July	.20	.20	.25	.22
August	.20	.20	.33	.27
September	.19	.18	.40	.33
October	.19	.19	.35	.35
November	.19	.19*	.35	.35
December	.20	.16	.35	.35
Year	.20	.16	.35	.19

* Stocks exhausted.

Nineteen Years' Prices

	Per pound	
	H.	L.
1929	$0.35	$0.19
1928	.20	.16
1927	.20	.15
1926	.24	.20
1925	.29	.25
1924	.38	.20
1923	.34	.30
1922	.34	13.
1921	.35	.13
1920	.80	.35
1919	.80	.50
1918	.62	.47
1917	.50	.12
1916	.12	.08¾
1915	.10	.08
1914	.20	.10
1913	.23	.13
1912	.26	.22
1911	.40	.36

Licorice

November 22, 1871, the price was 8c.; October 18, 1881, 5c. to 6c.; 1891, 3½c. to 5c.; 1901, 3¼c. to 4c.; 1911, 4c. to 4½c.; 1913, 4½c. to 5½c.; 1918, May, 34c.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05½	$0.05½	$0.06	$0.06
February	.05½	.05½	.06	.06
March	.05½	.05½	.06	.06
April	.05½	.05½	.06	.06
May	.05½	.05½	.06	.06
June	.05½	.05½	.06	.06
July	.05½	.05½	.06	.06
August	.05½	.05½	.06	.06
September	.06¾	.05½	.06	.06
October	.06	.06	.06	.06
November	.06	.06	.06¼	.06
December	.06	.06	.06½	.06
Year	.06¾	.05½	.06½	.06

Mandrake

April 14, 1875, the price was 5c. to 7c.; October 18, 1881, 5c. to 6c.; 1891, 3¾c. to 4¼c.; 1901, 4c. to 5c.; 1911, 6c. to 6½c.; 1913, 7c. to 7½c.; 1920, February, 42c.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.15	$0.11	$0.11
February	.16	.15	.11	.11
March	.16	.16	.11	.11
April	.16	.16	.11	.11
May	.16	.16	.11	.11
June	.16	.15	.11	.11
July	.15	.15	.11	.11
August	.15	.14	.11	.11
September	.13	.13	.11	.11
October	.13	.12	.11	.11
November	.12	.10½	.11	.11
December	.11	.09½	.11	.11
Year	.16	.09½	.11	.11

Orris, Florentine

November 22, 1871, the price was 15c. to 16c.; October 18, 1881, 15c. to 19c.; 1891, 35c. to 40c.; 1901, 9c. to 11½c.; 1911, 9½c. to 10c.; 1913, 15½c. to 16½c.; 1918, October, 29c.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09½	$0.09½	$0.20	$0.20
February	.10	.09½	.26	.20
March	.10	.10	.26	.26
April	.10	.10	.26	.26
May	.10	.10	.26	.26
June	.10	.10	.26	.26
July	.12½	.10	.26*	26.
August	.12½	.12½	.30	.30
September	.13½	.13	.30	.30
October	.13½	.13½	.30	.30
November	.13½	.14	.27	.27
December	.20	.18	.27	.27
Year	.20	.09½	.30	.20

* Stocks became exhausted.

Orris, Verona

January 17, 1872, the price was 14c.; October 18, 1881, 8c. to 10c.; 1891, 14c. to 17c.; 1901, 4c. to 6c.; 1911, 9c. to 9½c.; 1913, 13½c. to 14½c.; 1918, November, 28c.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09	$0.08½	$0.17	$0.14
February	.09	.09	.21	.17
March	.09	.09	.22	.22
April	.09	.09	.22	.22
May	.10	.10	.23	.22
June	.10	.10	.23	.23
July	.11½	.10	.28	.23
August	.11½	.11½	.30	.26
September	.12½	.11½	.26	.26
October	.12½	.12½	.26	.26
November	.13	.12½	.25	.25
December	.14	.13	.25	.25
Year	.14	.08½	.30	.14

Rhubarb, High Dried

October 18, 1871, the price was 55c.; 1881, 18c. to $1; 1890, 30c. to 70c.; 1901, 17½c. to 25c.; 1911, 16c. to 17c.; 1913, 16c. to 17c.; 1919, December, $1.90.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.39	$0.37
February	.35	.35	.37	.37
March	.35	.35	.37	.37
April	.38	.35	.37	.36
May	.40	.39	.36	.33
June	.39	.39	.35	.33
July	.39	.39	.33	.32
August	.39	.39	.32	.32
September	.40	.39	.32	.32
October	.40	.40	.32	.32
November	.40	.36	.32	.32
December	.39	.36	.32	.26
Year	.40	.35	.39	.26

Sarsaparilla, Mexican

October 18, 1871, the price was 17c.; 1881, 9⅜c. to 10½c; 1891, 14c. to 15c.; 1901, 7c. to 7¼c.; 1911, 16c.; 1913, 18c. to 19c.; 1918, March, 70c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.21	$0.21	$0.40	$0.30
February	.21	.21	.42	.40
March	.23	.21	.50	.44
April	.22	.22	.50	.35
May	.22	.22	.35	.31
June	.20	.20	.30	.29
July	.20	.20	.29	.26
August	.20	.20	.26	.26
September	.20	.20	.26	.26
October	.20	.19	.26	.26
November	.20	.20	.23	.23
December	.30	.20	.23	.22
Year	.30	.19	.50	.22

Twenty Years' Prices

	Per pound	
	H.	L.
1929	$0.50	$0.22
1928	.30	.19
1927	.40	.21
1926	.45	.30
1925	.35	.19
1924	.30	.18
1923	.35	.22
1922	.45	.23
1921	.43	.38
1920	.47	.36
1919	.55	.30
1918	.70	.32
1917	.60	.13½
1916	.13	.10½
1915	.15	.09
1914	.50	.10
1913	.28	.14
1912	.19	.11
1911	.18½	.09
1910	.11	.08¾

Senega

October 18, 1871, the price was $1.60; 1881, 57½c. to 60c.; 1891, 40c; 1901, 57c.; 1911, 55c. to 57½c.; 1913, 66c. to 68c.; 1920, January, $2.50.

	Per Pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.28	$1.27	$1.25	$1.25
February	1.28	1.28	1.25	1.25
March	1.30	1.30	1.25	1.25
April	1.30	1.30	1.25	1.25
May	1.30	1.30	1.25	1.25
June	1.30	1.30	1.20	1.15
July	1.28	1.10	1.15	1.05
August	1.20	1.20	1.00	1.00
September	1.20	1.20	1.00	.95
October	1.25	1.20	.95	.95
November	1.25	1.25	.95	.90
December	1.25	1.25	.90	.90
Year	1.30	1.10	1.25	.90

Twenty Years' Prices

	Per pound	
	H.	L.
1929	$1.25	$0.90
1928	1.30	1.10
1927	1.28	.72
1926	.75	.58
1925	.68	.50
1924	.65	.53
1923	.75	.60
1922	1.10	.74
1921	.90	.60
1920	2.50	.90
1919	2.40	.90
1918	1.05	.80
1917	.85	.60
1916	.68	.40
1915	.45	.35
1914	.50	.38
1913	.80	.63
1912	.65	.59
1911	.60	.42
1910	.60	.42

Squill, White

November 22, 1871, the price was 6c. to 6½c.; October 18, 1881, 6c. to 7c.; 1891, 5½c. to 7½c.; 1901, 3¾c. to 4c.; 1911, 3¾c. to 5c.; 1913, 6c. to 8c.; 1918, November, 16c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09	$0.08	$0.10	$0.09
February	.12	.12	.10	.10
March	.14	.12	.10	.10
April	.14	.14	.10	.10
May	.16	.14	.10	.10
June	.16	.16	.10	.10
July	.16	.11	.10	.09½
August	.16	.16	.09½	.09½
September	.16	.10	.09½	.08
October	.10	.09	.08	.08
November	.09	.09	.08	.08
December	.09	.09	.08	.07½
Year	.16	.09	.10	.07½

Valerian, U.S.P.

November 22, 1871, the price was 20c. to 35c.; October 18, 1881, German, 12c. to 13½c.; 1891, 7½c. to 8c.; 1901, 5½c. to 6c.; 1911, 13c. to 13½c.; 1913, 9½c. to 10c.; 1919, January, $1.65.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.17	$0.17	$0.24	$0.24
February	.17	.17	.24	.24
March	.17	.16	.24	.24
April	.16	.16	.23	.23
May	.16	.16	.23	.22
June	.14	.14	.22	.22
July	.14	.14	.22	.21
August	.14	.14	.20	.20
September	.17	.14	.20	.20
October	.23	.17	.24	.24
November	.24	.23	.25	.25
December	.24	.24	.24	.21
Year	.24	.14	.25	.20

Seeds

Anise, Spanish

November 22, 1871, the price of German was 14c.; October 18, 1881, 9c. to 10c.; 1894, German, 5½c. to 7c.; 1901, Russian, 5½c. to 6c.; 1911, Spanish, 8¼c. to 9c.; 1913, 8½c. to 9½c.; 1917, February, 30c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.14¼	$0.14¼	$0.17¼	$0.19
February	.15½	.15	.17	.17
March	.15¾	.15½	.17	.17
April	.15¾	.15	.17	.16¾
May	.15	.14¼	.16¾	.16¼
June	.14¼	.14¼	.16	.15¾
July	.15	.14¼	.15¾	.15
August	.15½	.15	.15	.15
September	.16	.16	.15	.14½
October	.17	.17	.15	.14¼
November	.18	.17	.14½	.14¼
December	.17½	.17½	.14¼	.13½
Year	.18	.14¼	.17½	.13

(Continued on page 99)

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Essential Oils: Market Review

Price trend in the market for essential oils in 1929 had two pronounced swings. From January to the middle of April the swing was upward. From then to the end of the year it was downward with temporary suspension of the declining movement noted toward the end of July only to be followed by a steady, progressive, and continuous fall in values throughout the balance of the year. In this respect, the market differed sharply from that in 1928 when prices advanced almost continuously throughout the year. Parallel with the rather precipitate fall in quotations toward the end of the year came contraction of demand, diminution of sales, and general market stagnation save for jobbing orders that cared for immediate needs of most buyers.

Comparative Values

Oil, Paint and Drug Reporter index numbers, based on 100 as the average price for twenty essential oils August 1, 1914, ranged as follows by quarters over 1928:—

Jan. 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
189	217	196.7	169.9	149.1

Domestic Oils

Production of domestic oils showed some gain in 1929. The improvement in stocks available was responsible in some measure for the more favorable quotations that prevailed during the latter part of the year especially. However, it should not be understood that anything resembling overproduction existed. The gain over 1928 was conservative and served mainly to return stocks to a tonnage more nearly normal.

Two exceptions were peppermint and spearmint. The output of both was conservative enough to permit the maintenance of a generally firm undertone throughout the year on the basis of a rising trend of values. While demand was not vigorous, holders managed to keep prices rather well stabilized following the advance that came when it seemed that the extreme cold of the previous winter, plus plant blights, had reduced the probable production. Gradually, however, peppermint prices softened somewhat toward the end of the year. Spearmint on the contrary, displayed far more basic strength than did peppermint. The crop was in very strong hands and it was not until after the turn of the year that firsthand holders were inclined to accept bids.

The price trend in peppermint from January through May was downward. Quotations began the year at $3.35 per pound and by the end of May they were down to $2.95. June found the market unchanged at that figure. In July, the advance set in. Prices started at $3.10 per pound and reached $3.40 by the close of the month. The high point for the year was reached in August when $3.75 per pound was done. The advance in that month was 35 cents per pound. In September, quotations dropped from $3.75 to the basis of $3.55. October held the market at that point. November witnessed sales at $3.40 and that quotation prevailed at the end of the year.

Spearmint underwent a decline from the January price at $4.30 to $4 reached in April. May, June, and a part of July found a stable market at $4. Toward the end of July, however, the market strengthened at $4.10. In August, quotations were raised from $4.10 to the high point for the year—$4.60. That quotation prevailed throughout the balance of the year.

The domestic citrous oils were downward in trend of prices during the year. However, discussion of Californian lemon and orange oils will be found with the market comments anent the Messina oils.

Wormseed was noted for strength from about midyear on. Crop conditions were not entirely favorable due to extremely cold weather and, more especially, to plant blight that caused some decrease in the size of the wormseed crop. Furthermore, strong factors bought up the crop early and the result was a concentration of stocks in the hands of factors well able to hold for higher prices. They were successful. The advance was very rapid once it set in.

Quotations began the year at $1.85 per pound and that remained the market until April when a spot quotation of $1.80 was established. The market remained at that position during May, June and a part of July. In the latter month several sharp advances resulted in quotations being $2.75 per pound by the close of the period. August brought about a market at $2.90 per pound and in September the high point for the year was reached at $3.25 per pound. That figure was in effect at the end of the year.

Clove oil was a fairly strong article early in the year due to the very high prices at which raw material had been obtained. Later on, however, an excellent crop of clove spice was marked at declining prices. Oil makers in this market were compelled by competition to steadily reduce quotations. Prices were at their lowest point at the end of the year. Quotations in January were between $2.50 and $2.65 per pound. In February a market of great stability was established at $2.60 per pound. That figure remained in effect until the latter part of August when it was reduced to $2.50. In September it sagged to $2.15. By the end of October it was down to $1.80 where it remained until late in December when the low point for the year was reached at $1.75.

The following tabulation supplies prices for the principal domestic oils in January, midyear, and December 31:—

	Per pound		
	Jan. 1.	July 1.	Dec. 31.
Cedarleaf	$0.90	$1.00	$1.05
Cedarwood	.26	.26	.26
Clove	2.50	2.60	1.75
Erigeron	1.85	1.85	1.80
Hemlock	.95	1.00	1.00
Lemon, Californian	4.15	3.60	2.15
Mace	1.85	1.80	1.60
Nutmeg	1.85	1.80	1.60
Pennyroyal	1.85	1.65	1.65
Peppermint, natural	3.35	2.95	3.40
redistilled	3.60	3.15	3.60
Sassafras, artificial	.26	.34	.33
natural	.80	.80	1.20
Spearmint	4.30	4.00	4.60
Spruce	.95	.95	.95
Tansy	4.00	4.00	3.75
Wormseed	1.85	1.80	3.25
Wormwood	25.00	30.00	12.00

Foreign Oils

Cold weather in Europe tended to reduce the production of a number of oils produced on the Continent, bringing higher prices as a natural result. Far Eastern oils underwent some advances during the year, but toward the close there was a downward tendency. Demand for most imported products showed a material curtailment toward the end of the year.

French Oils

Under this head may be conveniently grouped geranium, lavender, neroli, vetiver and ylang ylang.

During the first six months of 1929, Algerian geranium was a rather strong article due to the absence of excessive stocks and a generally advanced replacement market due to concentration of supplies in rather strong hands. Later on, the market eased off somewhat, but prices never reached the levels in force early in the year. Quotations in January were noted at $3.90 per pound and that price was repeated in February under very fair trading. In March, the market was advanced from $3.90 to the basis of $4.10 and became very firm on the spot at that position. That quotation remained in effect throughout April. In May, the advance was resumed with demand broader in character and fully supporting prices at $4.15 per pound. June sales were lowest at $4.50 per pound and as high as $5 was paid before the end of that month. In July, $5 was still being done until toward the close of the month the market receded to $4.75 per pound. It remained well stabilized at $4.75 until in October when sellers replaced at lower prices and reduced the spot quotation to the basis of $4.50. The quotation remained in effect to the end of the year.

Reports of a probable scarcity of lavender oil proved to be without foundation. Propaganda in favor of an advancing market was noted, the basis of the same being cold weather during the winter term. However, the production was well up to normal and quality was understood to be excellent. The market prices on spot were held very steady throughout the year at $2 60 per pound.

Fluctuations in prices for Bourbon vetiver were very narrow. The market appeared to be quite well stabilized at all times and hence buyers traded with a deal of confidence throughout the year. Quotations were $6 during the first half of the year. In the second half, they were easier and at the close of the year the market was down to $5.85 with offerings ample thereat. Ylang ylang had a similar price history. Bourbon oil sold at $10 for more than half of the year, but by December prices were down to $9.75 per pound and seemed to be easy thereat owing to the very light consuming demand effective at that time.

Neroli was a very strong feature. Production was cut deeply by the freezing of the orange flowers in France during the excessive cold snap that brought snow to the Mediterranean area. The output was smaller than for many years past and resulted in severe price advances that finally brought the market to a position virtually nominal. Quotations for bigarde and petals were $75 and $85 per pound in January. By midyear the market was up to $100 and $150 per pound respectively. The December quotations were $125 and $170 per pound respectively and offerings were exceedingly small.

Italian Oils

All citrous oils were priced mainly favorable for buyers almost throughout the year. The pronounced weakness of bergamot, lemon and orange oils from Italy served to provide the market with feature interest from midyear onward. Toward the end of the year it appeared that the market had no bottom; prices declined to positions quite the lowest in the past several years. The decline seemed to be connected with the steady encroachment of California lemon and orange into the consuming field formerly held exclusively by the products of Italy and the West Indies. Furthermore, late in the year it was evident that the production of Messina oils would be very heavy in 1929 and hence shippers were disposed to discount the future positions very early.

Bergamot was high for the year in January when some business was done at $5.50 per pound. The article also sold for $5.25 before the end of that month. By the end of February prices had declined from $5.25 to as low as $4 with the market very weak. March found a somewhat stronger position with $4.75 most generally quoted. April came in with further declines, the market dropping from $4.75 to a low for the month at $4.25. By the end of June sellers were having hard work moving the article at $4. During July prices held unchanged. In August, quotations were reduced from $4 to the basis of $3.80 with demand still small. The low point in September was $3.50; in October, $3.40; in November, $3.30; and the lowest price for the year prevailed at the end of December when demand was stagnant and sellers quoted nominal prices at $2.75.

Messina lemon oil began the year at $4 per pound. Very fair demand put prices to firmer but unchanged position in February. By the end of March, the market had moved up to $5 per pound from a beginning at $4.10. The highest prices for the year were obtained in March and April, sales setting the high point at $5. Late in April a decline set in and quotations were down to $4.50. In May, the market dropped to $4.20. In June it was down to $4.10, where it also remained during July. August sales were made at $4.10 and down as low as $3.75. In September, $3.50 was reached; October, $3.25; November, $3; and December $2.50, which was the lowest price for the year.

California lemon sold at $4.15 in January, was down to $3.60 by midyear, and the article had a very slow sale in December despite the very low quotation of $2.15. Production of Californian lemon was heavy in 1929 and aggressive selling methods caused the article to find increasing favor with many consumers who in the past refused to entertain offerings of anything but the Messina article.

Price history of Messina orange oil paralleled that in lemon very closely. The market was highest at $6.25 per pound in March after an opening price for the year at $5.35. Declines were steady until July when the market remained stable at $5. In August the decline was resumed. It was steady for the balance of the year and brought quotations down to $3.25 by the close of the year.

West Indian orange also felt the effect of the declining prices for Italian oil, though the price decline for West Indian material was not accompanied by the pronounced weakness noted in the competing article. The market was $5 and $5.15 per pound in January. The highest price for the year was $6 reached in March. By July, $4.75 was being done and that price ruled until in late September it was reduced to $4.25. October quotations ranged downward from $3.50 to $3.25 as the month advanced. November transactions were mainly at $3.15, which was low for the year and which was also the December quotation.

California distilled and expressed oil of orange were heavily produced and following the downward movement of prices that featured the market for the imported oils almost steadily throughout the last three quarters of the year. Distilled oil declined from $4.25 per pound in January to $3.10 by July 1 and ended the year at $1.95. Expressed was quoted $5.50 per pound in January, stood at $4.85 by July 1, and sold very poorly in December at $3.50. However, consumption of the Californian oils was larger in 1929 than in any previous year, and the success of the domestic oil affected the West Indian and Italian articles greatly.

Far Eastern Oils

Among the Far Eastern oils, sandalwood and eucalyptus occupied prominent positions. While sandalwood is distilled in this country, the official USP oil is made from sandalwood sent here by the Mysore Government in order to avoid the duty that would have to be paid, did it ship oil in place of wood. A shortage of oil was noted throughout the greater part of the year. Dealers found difficulty in obtaining deliveries due them on contracts, and hence control of the market was eventually thrown into resellers, or dealers. The market in January was $7.35 per pound. It had risen to $7.75 at midyear. During the summer and fall months as high as $9 was paid. The December quotation was $8.50 per pound, but that figure prevailed only with the official agents for the Mysore oil. A change in official agents was made during the year. The policy of the Mysore Government, as exemplified by the sales activities of the agents was to sell the oil directly to the manufacturing consumers. It was said that other dealers could obtain oil, but not at a price which would permit them to compete in the open market. In other words, the dealers declared that the price they paid was also the one which manufacturing consumers paid the official distillers. Therefore, trade in the article was steadily concentrated in the hands of the official agents. Some quarters were disposed to agitate for the admission of Australian oil into the new pharmacopoeia in order to break the monopoly being built up by the Mysore Government sales policy.

Eucalyptus was a buyers' market throughout the period. New importers brought in stocks showing a cost that permitted a more lively competition toward the close of the year. Earlier, more particularly during the first quarter of the year, demand had been very good because of the widespread presence of the influence; consumption became abnormally heavy and attracted to the article more than the usual number of importers. Later on, stocks were excessive and weak holders depressed the market under competitive circumstances. Quotations were 55c. per pound in January, 53c. in July, and 51c. by the close of the year. Purchases by manufacturing consumers during the last quarter of the year were disappointingly small.

Anise was a rather quiet article until shippers in China failed to declare shipments that should have been made in November and December. The failure to ship was due, it was said, to war conditions that made it impossible to get oil down to the seaboard from the interior. Quotations in January were 56c. per pound. By midyear the market was 61c. The December quotation was about nominal at $1 as most sellers refused to accept orders save from their own customers. Stocks were very low and need for conservation of supplies was quite evident. It was not until late in January that any declarations were made.

Camphor oil from Japan was another strong item during the greater part of the year. Production was subnormal in Japan and led to shortage in stocks to an extent that could do nothing less than advance prices sharply and steadily throughout the year. It was not until after the turn of the year that a downward movement in values came in earnest. The advance of course raised quotations on products derived from camphor oils. Sassafrassy oil was priced at 15½c per pound in January. The market was 19c. per pound by midyear. Quotations eventually touched 28c. per pound, at which price the market ended the year. White oil advanced from 11½c. per pound in January to 20c. by the first of July. The advance was continued until 35c. per pound was reached. By December 31, quotations had sagged slightly ending the year at 30c.

The following tabulation gives prices for the leading foreign oils on January 1, July 1 and December 31:—

	Per Pound		
	Jan. 1.	July 1.	Dec 31.
Amyris	$2.25	$1.95	$1.95
Anise	.56	.64	1.00
Apricot kernel	.44	.38	.35
Bay, West Indian	2.50	2.30	2.20
Bergamot	5.50	4.00	2.75
Birch tar, crude	.11	.13	.13
rectified	.40	.45	.45
Bois de Rose, Brazilian	1.60	1.50	1.50
Cayenne	2.35	2.15	1.85
Cade	.25	.25	.26
Camphor, sassafrassy	.15½	.19	.28
white	.11½	.20	.30
Cassia, redistilled	2.05	1.50	1.45
Citronella, Ceylon, drums	.44	.43	.55
Java, drums	.48	.55	.69
Coriander	10.25	7.50	5.75
Croton	.85	1.75	2.75
Eucalyptus, drums	.55	.53	.51
Fennel	.80	.93	.93
Geranium, Algerian	3.90	5.00	4.50
Bourbon	4.35	4.75	4.50
Turkish	3.10	3.10	3.10
Juniper	2.40	2.10	2.10
Lavender	2.60	2.60	2.60
Lemon, Messina	4.00	4.10	2.50
Lemongrass	.85	.80	.80
Lime, distilled	7.50	8.00	7.50
expressed	No stocks	20.00	20.00
Linaloe	2.50	2.50	2.30
Neroli, bigarde	75.00	100.00	125.00
petale	85.00	150.00	170.00
Orange, Messina	5.50	5.00	3.25
West Indian	5.00	4.75	3.15
Pennyroyal, imported	1.15	1.10	1.15
Petitgrain, Paraguay	1.90	1.85	1.80
Rose, natural	11.50	14.50	15.00
Vetiver, Bourbon	6.00	6.00	5.85
Ylang ylang, Bourbon	10.00	10.00	9.75

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Essential Oils: Record of Prices

Almond, Bitter

May 29, 1872, the price was $14; October 18, 1881, $4.50 to $7.50; 1891, $4.50 to $7.25; 1901, $3.50 to $4.25; 1911, $3.50 to $5; 1913, $3.50 to $6.50; 1917, November, $13.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$2.75	$2.75	$2.75	$2.75
February	2.75	2.75	2.75	2.75
March	2.75	2.75	2.75	2.75
April	2.75	2.75	2.75	2.75
May	2.75	2.75	2.75	2.50
June	2.75	2.75	2.50	2.50
July	2.75	2.75	2.50	2.50
August	2.75	2.75	2.50	2.50
September	2.75	2.75	2.50	2.50
October	2.75	2.75	2.50	2.50
November	2.75	2.75	2.50	2.50
December	2.75	2.75	2.50	2.50
Year	2.75	2.75	2.75	2.50

Almond, Artificial, U.S.P.

January 20, 1902, the price was 75c. to $1; October 18, 1911, 48c. to 85c.; 1913, 40c. to 45c.; 1917, January, $5.

(For comparative prices, 1928 and 1929, see Benzaldehyde, Coaltar Products, page 62.)

Bergamot

October 18, 1871, the price was $4.50 to $4.75; 1881, $2.45 to $2.50; 1891, $2.90 to $3.70; 1901, $2.50 to $2.75; 1911, $3; 1913, $6 to $6.50; 1918, September, $7.50.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$5.50	$5.00	$5.50	$5.25
February	5.25	5.25	5.25	4.00
March	5.25	5.00	4.75	4.75
April	5.00	4.75	4.75	4.25
May	5.25	5.15	4.25	4.15
June	5.00	5.15	4.15	4.00
July	5.00	5.00	4.00	4.00
August	5.00	5.00	4.00	3.80
September	5.00	5.00	3.80	3.50
October	5.00	5.00	3.50	3.40
November	5.50	5.00	3.40	3.30
December	5.50	5.50	3.30	2.75
Year	5.50	4.75	5.50	2.75

Cassia, Redistilled, U.S.P.

February 8, 1909, the price was $1.75 to $1.85; October 18, 1911, $1.25 to $1.40; 1913, $1.30 to $1.40; 1918, November, $3.75.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$1.75	$1.75	$2.05	$1.90
February	2.00	1.85	1.85	1.80
March	2.00	2.00	1.80	1.70
April	2.25	2.00	1.70	1.60
May	3.00	2.30	1.60	1.60
June	3.40	2.70	1.60	1.50
July	2.70	2.70	1.50	1.50
August	2.40	2.35	1.50	1.50
September	2.35	2.15	1.50	1.50
October	2.35	2.30	1.50	1.45
November	2.25	2.20	1.45	1.45
December	2.15	2.05	1.45	1.45
Year	3.40	1.75	2.05	1.45

Clove, U.S.P.

November 22, 1871, the price was $1.40 to $1.50; October 18, 1881, $1.90 to $2; 1891, 75c. to 77½c.; 1901, 60c. to 62½c.; 1911, 97½c. to $1; 1913, $1.15 to $1.20; 1917, November, $4.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$1.35	$1.25	$2.65	$2.50
February	1.35	1.30	2.60	2.60
March	1.35	1.35	2.60	2.60
April	1.35	1.35	2.60	2.60
May	1.60	1.40	2.60	2.60
June	1.60	1.55	2.60	2.60
July	1.80	1.60	2.60	2.60
August	1.85	1.80	2.60	2.50
September	1.80	1.75	2.50	2.15
October	2.10	1.75	2.00	1.80
November	2.50	2.25	1.80	1.80
December	2.50	2.50	1.80	1.75
Year	2.50	1.25	2.65	1.75

Geranium, Rose, Algerian

November 22, 1871, the price was $8 to $10; October 18, 1881, $4.50 to $8.50; 1891, $7.50 to $8.50; 1901, $5.25 to $6.50; 1911, $4.25 to $4.50; 1913, $9.50 to $10; 1918, November, $11.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$2.75	$2.75	$3.90	$3.90
February	2.90	2.90	3.90	3.90
March	3.25	2.60	4.10	3.90
April	3.25	3.25	4.10	4.10
May	3.75	3.50	4.15	4.15
June	3.75	3.50	5.00	4.50
July	3.40	3.40	5.00	4.75
August	3.40	3.40	4.75	4.75
September	3.75	3.40	4.75	4.75
October	4.00	3.75	4.75	4.50
November	4.00	4.00	4.50	4.50
December	4.00	4.00	4.50	4.50
Year	4.00	2.75	5.00	3.90

Lavender Flower, U.S.P.

November 22, 1871, the price was $2.90 to $3; October 18, 1881, $2.10; 1891, $1.50 to $1.75; 1901, $1.20 to $1.30; 1911, $2.25 to $3.25; 1913, $3.75 to $4; 1919, December, $11.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$3.00	$3.00	$2.60	$2.60
February	3.00	2.75	2.60	2.60
March	2.75	2.75	2.60	2.60
April	2.75	2.75	2.60	2.60
May	2.75	2.75	2.60	2.60
June	2.75	2.75	2.60	2.60
July	2.75	2.75	2.60	2.60
August	2.75	2.75	2.60	2.60
September	2.75	2.60	2.60	2.60
October	2.60	2.60	2.60	2.60
November	2.60	2.60	2.60	2.60
December	2.60	2.60	2.60	2.60
Year	3.00	2.60	2.60	2.60

Lemon, Messina

October 18, 1871, the price was $3.75 to $5.12½; 1881, $3 to $3.25; 1891, $2.15 to $2.75; 1901, 85c. to 95c.; 1911, $1.60 to $1.80; 1913, $3.75 to $4; 1920, March, $2.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$2.75	$2.35	$4.00	$4.00
February	2.75	2.65	4.00	4.00
March	2.65	2.60	5.00	4.10
April	3.00	2.45	5.00	4.50
May	3.25	3.00	4.50	4.20
June	3.50	3.35	4.20	4.10
July	3.50	3.40	4.10	4.10
August	4.00	3.80	4.10	3.75
September	3.85	3.75	3.75	3.50
October	3.75	3.75	3.35	3.25
November	4.35	3.75	3.25	3.00
December	4.35	4.00	2.90	2.50
Year	4.35	2.35	5.00	2.50

Twenty-nine Years' Prices

	Per pound— H.	L.
1929	$5.00	$2.50
1928	4.35	2.35
1927	2.75	2.00
1926	3.25	2.00
1925	2.00	.95
1924	.97½	.70
1923	.80	.65
1922	.87	.63
1921	.95	.65
1920	2.00	.95
1919	1.85	1.05
1918	1.85	.87½
1917	1.20	1.05
1916	1.05	.90
1915	1.25	.95
1914	3.75	1.05
1913	4.75	2.20
1912	2.10	1.30
1911	1.65	.80
1910	.82½	.75
1909	3.00	.72½
1908	1.50	.70
1907	2.00	1.00
1906	1.20	.57
1905	.57½	.55
1904	.55	.50
1903	.70	.55
1902	.80	.65
1901	1.15	.80

Orange, Messina, U.S.P.

April 2, 1873, the price was $3.75; October 18, 1881, $3 to $3.25; 1891, $2.80 to $3.12½; 1901, $1.20 to $1.55; 1911, $2.45 to $2.60; 1913, $3.75 to $4; 1920, June, $11.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$3.15	$2.90	$5.50	$5.35
February	3.15	3.00	6.00	5.00
March	3.00	3.00	6.25	6.00
April	4.15	3.10	6.00	5.75
May	10.00	5.00	5.75	5.50
June	10.00	9.00	5.25	5.00
July	8.50	8.00	5.00	5.00
August	8.00	8.00	5.00	4.90
September	7.75	7.00	4.90	4.65
October	6.00	5.40	4.50	4.25
November	5.50	5.00	4.25	4.00
December	5.75	5.50	3.90	3.25
Year	10.00	2.90	6.25	3.25

Orange, West Indian

April 1, 1915, the price was $1.35; 1920, June, 69c.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$2.75	$2.75	$5.15	$5.00
February	2.75	2.70	5.50	5.15
March	2.85	2.85	6.00	5.90
April	4.50	2.85	5.75	5.60
May	9.50	4.75	5.60	5.40
June	9.50	8.25	5.25	4.75
July	8.00	7.00	4.75	4.75
August	7.00	7.00	4.75	4.75
September	6.75	5.75	4.75	4.25
October	5.75	5.00	3.50	3.25
November	5.00	4.50	3.25	3.15
December	5.25	5.00	3.15	3.15
Year	9.50	2.75	6.00	3.15

Peppermint, Natural

October 18, 1871, the price was $3.35 to $3.50; 1881, $2.70 to $2.80; 1891, $2.50 to $2.80; 1901, $1.65 to $1.75; 1911, $2.87½ to $2.95; 1918, $3.70 to $3.80; 1919, March, $9.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$3.30	$3.25	$3.35	$3.30
February	3.30	3.30	3.30	3.20
March	3.30	3.30	3.20	3.10
April	3.30	3.20	3.00	3.00
May	3.20	3.20	3.00	2.95
June	3.20	3.20	2.95	2.95
July	3.20	3.10	3.40	3.10
August	3.10	3.10	3.75	3.40
September	3.20	3.10	3.75	3.55
October	3.20	3.20	3.55	3.55
November	3.35	3.35	3.55	3.40
December	3.35	3.35	3.40	3.40
Year	3.35	3.10	3.75	2.95

Nineteen Years' Prices

	Per pound— H.	L.
1929	$3.75	$2.95
1928	3.35	3.10
1927	4.75	2.85
1926	26.00	4.75
1925	28.00	10.00
1924	10.00	3.25
1923	3.25	2.65
1922	3.25	1.70
1921	3.00	1.70
1920	8.25	5.00
1919	9.00	5.25
1918	5.25	2.90
1917	3.60	2.20
1916	2.30	1.80
1915	2.00	1.35
1914	4.60	1.40
1913	3.85	2.75
1912	2.85	2.75
1911	2.90	2.25

Sandalwood, East India, U.S.P.

November 22, 1871, the price was $9.50 to $10; October 18, 1881, $7 to $8; 1891, $2.10 to $6; 1901, $3.50 to $3.75; 1911, $2.75 to $3; 1913, $5.50 to $6; 1917, December, $14.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$7.00	$7.00	$7.75	$7.35
February	7.00	7.00	8.00	8.00
March	7.00	7.00	8.50	8.00
April	7.00	7.00	8.50	8.00
May	7.00	7.00	8.00	8.00
June	7.00	7.00	8.00	7.75
July	7.00	7.00	7.75	7.75
August	7.00	7.00	8.00	7.75
September	7.00	7.00	8.25	8.00
October	7.00	7.00	8.50	8.50
November	7.25	7.00	8.75	8.50
December	7.35	7.35	8.75	8.50
Year	7.35	7.00	8.75	7.35

Sassafras, Natural, U.S.P.

October 18, 1871, the price was $1.15 to $1.20; 1881, 57½c. to 65c.; 1891, 38c. to 42c.; 1901, 40c. to 43c.; 1911, 70c. to 75c.; 1913, 55c. to 60c.; 1918, October, $2.50.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$0.80	$0.80	$0.80	$0.80
February	.80	.80	.80	.80
March	.80	.80	.80	.80
April	.80	.80	.80	.80
May	.80	.80	.80	.80
June	.80	.80	.80	.80
July	.80	.80	.90	.85
August	.80	.80	.90	.90
September	.80	.80	1.20	.90
October	.80	.80	1.20	1.20
November	.80	.80	1.20	1.20
December	.80	.80	1.20	1.20
Year	.80	.80	1.20	.80

Spearmint, U.S.P.

June 5, 1872, the price was $4; October 18, 1881, $2 to $2.35; 1891, $1.85 to $2.35; 1901, $1 to $1.10; 1911, $4 to $4.50; 1913, $4; 1920, February, $13.50.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$4.25	$4.25	$4.30	$4.30
February	4.25	4.25	4.30	4.30
March	4.25	4.25	4.30	4.15
April	4.25	4.20	4.10	4.00
May	4.20	4.20	4.00	4.00
June	4.20	4.20	4.00	4.00
July	4.25	4.25	4.10	4.00
August	4.25	4.25	4.60	4.10
September	4.35	4.35	4.60	4.60
October	4.30	4.30	4.60	4.60
November	4.30	4.30	4.60	4.60
December	4.30	4.30	4.60	4.60
Year	4.35	4.20	4.60	4.00

Seventeen Years' Prices

	Per pound— H.	L.
1929	$4.60	$4.00
1928	4.35	4.20
1927	4.50	3.40
1926	12.75	4.50
1925	14.00	3.75
1924	4.25	2.40
1923	2.50	2.35
1922	3.25	2.30
1921	6.25	2.75
1920	13.50	6.25
1919	12.00	5.50
1918	5.50	3.40
1917	3.65	1.85
1916	1.90	1.50
1915	1.75	1.35
1914	4.00	1.50
1913	4.85	4.00

Sweet Birch, Southern

November 22, 1871, the price was $4.40 to $4.50; October 18, 1881, $3.15 to $3.20; 1891, $1.80 to $1.90; 1901, $1.40 to $1.60; 1911, $1.35 to $1.75; 1913, $1.50 to $2; 1919, December, $6.25.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$1.75	$1.75	$1.75	$1.75
February	1.75	1.75	1.75	1.75
March	1.75	1.75	1.75	1.75
April	1.75	1.75	1.75	1.75
May	1.75	1.75	1.75	1.75
June	1.75	1.75	1.75	1.75
July	1.75	1.75	1.75	1.75
August	1.75	1.75	1.75	1.75
September	1.75	1.75	1.75	1.75
October	1.75	1.75	1.75	1.75
November	1.75	1.75	1.75	1.75
December	1.75	1.75	1.75	1.75
Year	1.75	1.75	1.75	1.75

Wintergreen Leaf, Southern

October 18, 1901, the price was $2.25 to $2.90; 1911, $4.25 to $5; 1913, $4.25 to $4.50; 1919, September, $9.75.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$3.60	$3.60	$3.60	$3.60
February	3.60	3.60	3.60	3.60
March	3.60	3.60	3.60	3.60
April	3.60	3.60	3.60	3.60
May	3.60	3.60	3.60	3.60
June	3.60	3.60	3.60	3.60
July	3.60	3.60	3.60	3.60
August	3.60	3.60	3.60	3.60
September	3.60	3.60	3.60	3.60
October	3.60	3.60	3.60	3.60
November	3.60	3.60	3.60	3.60
December	3.60	3.60	3.60	3.60
Year	3.60	3.60	3.60	3.60

Wormseed

November 22, 1871, the price was $2.50 to $2.60; October 18, 1881, $2.25 to $2.50; 1891, $1.40 to $1.50; 1901, $1.10; 1911, $3.75 to $4; 1913, $2 to $2.20; 1918, July, $11.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$3.35	$2.80	$1.85	$1.85
February	3.35	3.35	1.85	1.85
March	3.35	3.35	1.85	1.85
April	3.25	3.25	1.85	1.80
May	3.00	3.00	1.80	1.80
June	3.00	2.85	1.80	1.80
July	2.75	2.60	2.75	1.80
August	2.50	2.45	2.90	2.75
September	2.45	2.30	3.25	2.90
October	2.35	2.20	3.25	3.25
November	2.10	1.90	3.25	3.25
December	1.90	1.90	3.25	3.25
Year	3.35	1.90	3.25	1.80

Imports of Aromatic Chemicals

Imports of synthetic aromatic chemicals entered for consumption in the United States compared as follows in volume and value in 1929 and 1928:—

	1929 Pounds.	1929 Invoice value.	1928 Pounds.	1928 Invoice value.
January	5,684	$7,850	9,994	$12,608
February	6,756	6,783	15,148	20,983
March	24,169	27,290	9,243	10,285
April	15,075	17,767	13,542	20,460
May	9,714	15,660	13,693	21,341
June	10,403	14,660	13,157	17,152
July	8,094	18,320	8,097	9,575
August	12,903	19,996	12,145	21,536
September	10,574	14,420	11,918	15,062
October	17,544	26,230	14,770	33,982
November	15,283	19,631	15,473	22,477
December	7,391	13,464	15,816	21,955
Totals	144,190	$202,071	152,996	$227,416

Drug Prices

(Continued from page 71)

Salol

August 20, 1894, the price was $3.05 to $3.10; October 18, 1901, $1.25 to $1.50; 1911, 85c. to 90c.; 1913, 55c. to 57½c.; 1917, January, $2.50.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$0.90	$0.90	$0.90	$0.90
February	.90	.90	.90	.90
March	.90	.90	.90	.90
April	.90	.90	.90	.90
May	.90	.90	.90	.90
June	.90	.90	.90	.90
July	.90	.90	.90	.90
August	.90	.90	.90	.90
September	.90	.90	.90	.90
October	.90	.90	.90	.90
November	.90	.90	.90	.90
December	.90	.90	.90	.90
Year	.90	.90	.90	.90

Santonin, Crystals

May 29, 1872, the price was $11 to $12; October 18, 1901, $5.25 to $5.50; 1911, $14.40 to $14.65; 1913, $20 to $26.50; 1920, May, $175.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$130.00	$130.00	$130.00	$130.00
February	130.00	130.00	130.00	130.00
March	130.00	130.00	130.00	130.00
April	130.00	130.00	130.00	130.00
May	130.00	130.00	130.00	130.00
June	130.00	130.00	130.00	130.00
July	130.00	130.00	130.00	130.00
August	130.00	130.00	124.00	124.00
September	130.00	130.00	124.00	124.00
October	130.00	130.00	124.00	124.00
November	130.00	130.00	124.00	124.00
December	130.00	130.00	124.00	123.00
Year	130.00	123.00	130.00	123.00

Seidlitz Mixture

July 14, 1875, the price was 27c. to 28c.; October 18, 1881, 23c.; 1891, 20c.; 1901, 13½c. to 14½c.; 1911, 15½c. to 16c.; 1913, 14½c. to 15c.; 1918, August, 36c.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$0.18½	$0.18½	$0.18½	$0.18½
February	.18½	.18½	.18½	.18½
March	.18½	.18½	.18½	.18½
April	.18½	.18½	.18½	.18½
May	.18½	.18½	.18½	.18½
June	.18½	.18½	.18½	.18½
July	.18½	.18½	.18½	.18½
August	.18½	.18½	.18½	.18½
September	.18½	.18½	.18½	.18½
October	.18½	.18½	.18½	.18½
November	.18½	.18½	.18½	.18½
December	.18½	.18½	.18½	.18½
Year	.18½	.18½	.18½	.18½

Sodium Benzoate

On October 18, 1901, the price was 44c. to 46c.; 1911, 26c. to 28c.; 1913, 23¾c. to 24c.; 1917, January, $8.75.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$0.50	$0.50	$0.50	$0.50
February	.50	.50	.50	.45
March	.50	.50	.45	.45
April	.50	.50	.45	.45
May	.50	.50	.45	.45
June	.50	.50	.45	.45
July	.50	.50	.45	.45
August	.50	.50	.45	.45
September	.50	.50	.45	.45
October	.50	.50	.45	.45
November	.50	.50	.45	.45
December	.50	.50	.45	.45
Year	.50	.50	.50	.45

Strychnine Alkaloid, Crystals

May 29, 1872, the price was $2.75 to $3; October 18, 1901, $1.05 to $1.15; 1901, 55c. to 80c.; 1911, 55c. to 60c.; 1913, 50c. to 60c.; 1920, April, $1.95.

	Per ounce— 1928. H.	L.	1929. H.	L.
January	$0.56	$0.56	$0.66	$0.66
February	.56	.56	.66	.66
March	.56	.56	.66	.66
April	.56	.56	.66	.66
May	.56	.56	.66	.66
June	.56	.56	.66	.66
July	.66	.56	.66	.66
August	.66	.66	.66	.66
September	.66	.66	.66	.66
October	.66	.66	.66	.66
November	.66	.66	.61	.61
December	.66	.66	.61	.61
Year	.66	.56	.66	.61

Thymol

January 20, 1896, the price was $2; October 18, 1901, $3.15 to $3.25; 1911, $1.25 to $1.35; 1913, $1.65 to $1.70; 1917, November, $17.50.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$2.75	$2.60	$2.25	$2.25
February	2.75	2.75	2.25	2.20
March	2.75	2.65	2.20	2.20
April	2.65	2.65	2.20	2.20
May	2.65	2.50	2.20	2.20
June	2.50	2.50	2.20	2.10
July	2.50	2.50	2.25	2.10
August	2.50	2.50	2.25	2.25
September	2.50	2.50	2.25	2.25
October	2.50	2.40	2.25	2.25
November	2.40	2.25	2.25	2.25
December	2.25	2.25	2.25	2.00
Year	2.75	2.25	2.25	2.00

Vanillin

October 19, 1890, the price was $3.75 to $4; 1901, 70c. to $1; 1911, 33c. to 36c.; 1913, 33c. to 36c.; 1918, August, 90c.

	Per pound— 1928. H.	L.	1929. H.	L.
January	$6.75	$6.75	$6.25	$6.25
February	6.75	6.75	6.25	6.25
March	6.75	6.75	6.25	6.25
April	6.75	6.75	6.25	6.25
May	6.75	6.75	6.25	6.25
June	6.75	6.75	6.25	6.25
July	6.75	6.75	6.25	6.25
August	6.75	6.25	6.25	6.25
September	6.25	6.25	6.25	6.25
October	6.25	6.25	6.25	6.25
November	6.25	6.25	6.25	6.25
December	6.25	6.25	6.25	6.25
Year	6.75	6.25	6.25	6.25

HALOWAX

Halowax Oil No. 1000

A thinly fluid mobile liquid. Leaves no deposit when heated. Is almost colorless. Specific gravity 1.25. Liquid down to —25° F. Congeals at —33° F. Has a standard flash point of about 350° F. Is volatile at 212° F. and slightly so at normal temperatures. Boiling point 500° to 520° F. Specific heat between 86° and 140° F. 0.282.

It is insoluble in caustic alkaline solutions and acid solutions except those that are powerful oxidizers.

It is soluble in many organic solvent liquids and oils, the best being carbon tetra-chloride and benzol; is a solvent for many aniline and other dyes, for rubber, gutta percha, many varnish gums and resins and for other waxes when mixed in the molten state, and for mineral and vegetable oils.

It is neutral and non-corrosive to metals, free of moisture and will not absorb moisture.

Halowax No. 1001

A crystalline solid of translucent neutral color. Will not support combustion. Specific gravity 1.589. Melting point 190° to 210° F. Boiling point 600° to 650° F. Loss by evaporation at 320° F. after two days 0.26 percent, after six days 1.44 percent.

It is soluble in practically all organic solvent liquids and oils when heated therewith; it is insoluble in caustic alkaline solutions and acid solutions except those that are powerful oxidizers.

It is a solvent for many aniline and other dyes; for rubber, gutta percha, many varnish gums and resins, and for other waxes when mixed in the molten state and for mineral and vegetable oils.

It is neutral and non-corrosive to metals, free of moisture and will not absorb moisture. Is high in dielectric strength and has an extraordinary specific inductive capacity. Melts to a clear liquid of low viscosity and has a faint odor.

Where the requirements warrant tonnage consumption we can produce to customers' specifications, HALOWAX products having special properties.

HALOWAX products offer many advantages in the following applications:

Impregnation of electrical condensers.
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Insecticides and fungicides.
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Gums, Waxes, Shellac: Market Review

In point of volume, business done in gums, waxes, and shellac during 1929 made a very fair showing. In some articles there was a definite increase over that in the previous year. In others, it was about even with the record in 1928. In a very few, the record failed to come up to that in the preceding year. As to prices, the trend was downward in many items, but there were some that were very prominent because of severe advances and general market strength.

Gums

The outstanding feature in the gum group was the sensational rise in quotations for gum arabic. Prices reached the highest point for the past sixteen years, save for 1917 and 1918, when they were as high as 33c. and 32c. respectively. The top price for 1929 was 29c.

Quotations were lowest at the beginning of the year, when orders were filled at 11c. per pound. From then on the climb was steady and without setback until the top price at 29c. was reached in September. That quotation remained effective in October and part of November. In the latter month new crop influences caused a softening and then decline in quotations, until by the close of the year the market was fairly easy and under considerable pressure to sell at 22c. per pound. There were few buyers at that figure.

The advancing market in 1929 was caused by a very short crop. Cold weather and generally unsatisfactory climatic conditions caused a decrease in collections. The falling off was so great as to create one of the strongest situations in years. In point of the extent to which prices were raised it set a record for the past sixteen years. The advance in 1929 amounted to 18c. per pound. In 1917 it had been 17c. In no other year did an advance come anywhere near tieing the rise in 1929 and 1917.

Arabic Production

Some idea as to the shortage of production in the previous year may be gained through a study of comparative figures. According to an accepted market authority in the primary market, the arrivals of the present new crop in the Kordofan stations during the month of November totaled 253 tons in 1929, as compared with 132 tons in 1928, 42 tons in 1927, and 164 tons in 1926. November new crop arrivals were said to have been the largest ever recorded. There were practically no stocks carried over this year, whereas in other years fair stocks were in hand.

When new crop came into the stations in such large quantities, some shippers began to discount the future market. They offered at very low prices and succeeded in booking a lot of business. However, toward the end of December three of the principal exporters withdrew all offerings, possibly seeking to stabilize the market. To some extent they succeeded. When they did offer, those who had sold short came into the market and succeeded in obtaining gum only at moderately advancing prices.

Liquidation of Stocks

This situation in the primary market was without effect on local dealers. Some held very high priced gum and were faced with a new crop available at sharply lower prices. They therefore pressed their holdings for sale. It was these pressure stocks that put the New York market down to 22c. by the end of December.

A factor that served to temper the local weakness was the advice that much of the early gathered new crop gum had proved to be immature and of a quality not likely to find favor in any consuming market. Therefore, sellers became somewhat reserved save in directions where the carry-over supply was so large as to make its liquidation absolutely essential. With the turn of the year quotations seemed to be slightly more stable and sellers were inclined to look for moderate improvement in market conditions. However, the situation abroad did not aid them greatly in taking a more generous view of the future of the market.

Aloe Strong

Curacao aloe continued a strong item throughout the year. The price trend was upward throughout the year, and it was not until the close of December that prices eased back even slightly. The price in January was 19c. and 20c. per pound. February and March were unchanged at 20c. April was caught in an upward swing, values rising from 20c. to 24½c. per pound. In July the advance was extended ½c. and sales were made at 25c. That quotation remained firm throughout the summer and early winter months. Late in December quotations were set back to 24c. The strength of the market was due to reduced production under a control scheme effecting in the primary market. During the year importers of Curacao aloe entered on a campaign to obtain a greater tare allowance from the primary market shippers. The campaign was a failure; shippers were obdurate and in the end the matter was brought to the attention of the Department of Commerce, with the request that it, working through diplomatic channels, endeavor to obtain justice for the American importers. The tare allowed is somewhere around 12 pounds and the dealers seek 15c. The matter had not got very far in the channels of diplomacy by the end of the year. Also, the chances for a successful issue of the problem were not very encouraging.

Asafetida was another article with a rising price history for the year. The advances were due primarily to the strength of the article in its primary market and the difficulty that importers experienced when they attempted to buy ample replacements when local stocks were running low. For the most part the year might be called one of steady strength divided into two portions. From January to August the market was firm and stable at 22c. per pound. From late in August to the balance of the year it was equally firm and stable at 25c. per pound. At the end of the year there was no sign of diminished strength.

Camphor Consumption Up

Camphor held some price interest during the year, but not to the extent that it had in former years, when speculation made developments important, interesting, and continuous throughout the business year. Price-wise, Japanese slabs had an upward trend owing to the increased call for the Japanese article and the increasing difficulties in producing enough to meet the needs of the world notwithstanding the fact that synthetic camphor has secured a place of increasing effectiveness and is not likely at any time to be dislodged from its position of great influence on world prices and market conditions.

Quotations in January were 59½c. per pound for the low and 62c. for the high. February and March found business done at 62c. throughout the period. In April quotations sagged to 60c. per pound, and while May, June and much of July found prices stabilized thereat, by the end of July quotations sagged again, this time to 50c. In August the market advanced again, reaching 62c. September brought in an era during which 64c. was the market and which prevailed in October, November, and a part of December. The slackening of demand late in December put quotations down to 63c. per pound.

It was in the matter of consumption that camphor held greatest interest in 1929. The importations of natural crude and refined camphor, and also of synthetic camphor during the year, in comparison with those in 1928, indicates the success that had awarded the efforts of Japan to recover some of the market she had lost to the German manufacturers of the synthetic product. The following tabulation of imports covers eleven months of the calendar year:—

	Pounds—		
	1929.	1928.	1927.
Natural, crude...	3,959,091	3,939,996	1,689,714
refined	1,947,025	1,026,277	1,186,485
Synthetic	3,765,378	1,828,627	2,609,875
Totals	9,071,494	6,854,900	5,486,074

From the above figures it is clear that Japan has managed to ship more crude and refined camphor in 1929 than she had in either 1928 or 1927. But—and it is a very important and far-reaching "but"—the German makers of synthetic camphor have gone ahead in expanding their market. Production was stepped up high in 1929 and it was clear that they were determined not to lose any ground to the Japanese.

A development that in the future may have a considerable influence on camphor affairs was the initiation of synthetic camphor manufacture in this country. A plant has been prepared in New Jersey and after much experimental work the company announced that by January 1, 1930, it would be in moderate production with a market in sight for every pound it could produce.

In ending this report it may be well to state that the very heavy increase in camphor consumption in the United States during 1929 was due in no small part to the development of non-breakable glass for use in the manufacture of motor car windshields and windows. And the use of such glass is apparently in its infancy.

Myrrh was an exception to the fairly general upward tendency of prices in the gum group. Heavy demand during 1928, caused by the influenza, had put prices to a very high peak. They reached 85c. in that year, but ended 1928 at 55c. Quotations began in January, 1929, at 55c. per pound and were down to 40c. by the end of February. They recovered to 42c. in March, only to dro again in April, reaching 38c. In May, 35c. was done and remained the market for June and July. August brought a further break and sales were made at 33c. In September, October and November the market was well stabilized at 33c. Recovery came with better demand in December and the year ended at 38c.

Waxes

Price trend in waxes was downward for the most part in 1929. In some instances the decline was due to conditions pertaining to production. In others, demand and available supply was an activating agent. But whatever the generic cause may have been, buyers were able to complete their manufacturing needs in a market rather favorable to them throughout the greater part of the year.

Beeswax Overproduced

Beeswax of all varieties felt the pressure of overproduction most of the time. African wax opened the year at 36c. per pound, which was the high point for the period. It sold for 36c. in February and for a portion of March. Toward the end of that month quotations receded to 34½c. April found business done at both 34½c. and 34c., the latter prevailing as the month passed out. May and a part of June witnessed sales at 34c. per pound, but by the time July had arrived 33½c. had become the market. The price was 33c. in August and continued to prevail during September, October and November. The low point for the year was reached in December, when confirmed business made prices 32c. The same price trend, though not to so great a degree. The fact was that when the 1929 crop of wax had been gathered, it was found that production was far above normal in all parts of the world. So true was that that the American beeswax producers were compelled to offer their product in the open market in order to dispose of a surplus; ordinarily, American wax never comes onto the open market but is contracted for by the makers of combs.

Offerings of Chilean, Brazilian, Santo Domingoan, Porto Rican, were likewise very plentiful. Had not church and state in Mexico composed their differences, in all probability the markets of the world would have been glutted beyond restoration. As it was, reopening of churches in Mexico again provided a market for beeswax produced in that country, thus returning conditions in that respect to a normal condition.

Importations of beeswax during the period January-November compared as follows in 1929, 1928, and 1927:—

Pounds—		
1929.	1928.	1927.
5,188,874	4,022,621	4,836,807

Quotations for yellow refined wax held at 41c. per pound from January until June, when the market became 38c. That figure prevailed until late in December, when business was accepted at 37c.

Carnauba Imports Gain

Carnauba wax imports in 1929 totaled 6,516,869 pounds, as compared with 5,272,931 pounds in 1928. No figures were available for 1927. This increase in consumption was achieved under fairly stable prices. However, the tendency was mainly downward much of the time. The high price for No. 3 North Country during the year was 25½c., prevailing in January and never reached again during the period. February sales were conducted at 25c. and 24½c. per pound, varying from week to week. By the end of March quotations were down to 24c. Recovery in demand put quotations to 25c. during April and May, the market being very steady thereat much of the time. Part of June and all of July brought a market at 24½c., followed by a rise to 25c. during August. The price extended into September, but eventually declined to 24c. October found prices of 24c. and 23½c. effective. They recovered to 24½c. in November, but in December fell away to the low for the year—23c. per pound.

A feature of trade in the latter part of the year was the comparatively small stocks available in the New York market. Nothing like an important surplus was available at any time. Despite this, prices were generally on the easy side. This was due in part to the belief that the crop in Brazil would be ample to large, and that financial conditions in that country made it necessary for merchants to turn merchandise into cash. This created the atmosphere of a buyers' market. At the very end of the year it was learned that arrivals here would be delayed after the turn of the year, due to the fact that the cargoes of three steamers out of Para had been transhipped to a fourth carrier. The result of the delay in arrivals at the port of New York. The delay caused some buying on the part of those with contract requirements to meet out of the delayed shipments. They bought in the local market and served thus to reduce the available stock. There remained the chance that contracts having in part been kept through spot purchases, the arrival of delayed shipments might produce a surplus of wax for the time being.

Japan Wax Easy Here

Japan wax was stronger in the primary market than in this country much of the time last year. Due to considerations of exchange and available supply, prices here were often far more favorable than they were in the replacement market. This was particularly true toward the end of the year, when competition on the spot drove quotations very close to, if not actually below, that in Japan.

On spot, price trend was steadily downward. January quotations were high for the year at 18½c. Those for November and December touched the bottom for the period, being 15¾c. In the months between, values fluctuated between 16½c. and 17c. per pound. At the end of the year Japan was quoted as a strong market with high exchange paralleling moderate supply and fair demand to the end that the prices asked were strongly maintained. The Department of Commerce provides no record of imports.

Shellac

Developments in the shellac market in 1929 may well be divided into two periods. The first extended from January to the third week in September. The second embraced that from the fourth week in September to the end of the year. The first period was one of marked stability in prices, freedom from fluctuations in excess of narrow limits and excellent consumption of shellac. The second ushered in an era of pronounced declines in price and general depression of demand. Two periods could scarcely be more in contrast. Sales in the second period were as poor as those in the first period had been good. Prices were then as weak as they had been firm and stable in the former period. And finally, market views at the end of the year contrasted sharply with those held throughout the major portion of the year; sellers were generally inclined to view the future with not too much confidence in view of the contraction of commerce generally throughout the country. Incidentally, the crash in shellac prices coincided, roughly, with the debacle of inflated prices in the security markets.

The decrease in shellac sales could be laid at the door of the arrival of a period in which manufacturing consumers found their orders curtailed through cancellations of contracts. The furniture trade was hit particularly hard; cancellations in that industry were so large and numerous as to seriously reduce the need for bonedry shellac and shellac varnishes. This reduction in actual needs quickly showed up in the shellac trade. Merchandise due for delivery under contracts backed up in the hands of dealers; buyers requested sellers to delay deliveries. To many, this amounted to requests to cancel contracts. The electrical insulation trades, the hat manufacturers, the button makers, and to some extent the record makers all withdrew from the market, becoming highly conservative in their outlook as concerned future requirements. The first period of the year had been one of satisfactory business, optimism, expansion and generally healthy conditions. The second seemed to be everything that the first period had not been. It was an era of contraction, repression, uncertainty, and general weakness both as to values and as to consumption requirements.

Importations during the year increased sharply over those in 1928. Official figures issued by the Department of Commerce give importations for eleven months in 1929 totaled 31,709,349 pounds, which compared with 22,019,900 pounds in the corresponding period, 1928.

Exports to the United Kingdom also showed a material gain during the year. This may be seen in the official warehouse returns from London. Stocks on January 1, 1929, totaled 19,469 packages, of which quantity 17,444 packages were orange shellac. Stocks December 31, 1929, were 25,804 packages, of which amount 24,490 packages were orange. The gain in orange shellac stocks was 6,965 packages; other kinds of shellac, 630 packages.

The year was noteworthy for the further working out of the machinery of the shellac bleachers' association for perfecting the open price idea in connection with the association's code of ethics under which it began to operate in 1928. During the year one shellac bleacher resigned from the association. The resignation seemed to have a marked effect on the Greater New York spot market, but not so much in other parts of the country.

Unless otherwise indicated, all prices quoted refer to T. N. shellac.

Record of the First Quarter

The spot quotation for T. N. shellac at the opening of 1929 was 43c. per pound, which was a price carried over from December, 1928. During the first three weeks of the new year prices remained stabilized at that figure. A decline of 1c. in the last week of January made the market 42c. During January quotations at Calcutta declined from 40⅝c. to 38⅝c., the latter price being reached as the month ended. The decline was progressive from week to week during the month, indicating pressure to sell. London quotations opened at the equivalent of 43.4c. per pound, New York, for the March delivery. A decline to 41.7c. came in the second week of the month and an upward reaction in the third week made the market 42.7c. The month ended at 41½c. per pound.

The feature of the market during the early part of the year was the forecast of a much smaller Bysacki crop due to unseasonable weather. The reports came in very early in February, were reiterated in March, and yet the allegations were liberally discounted by local importers, acting on the ground that it was far too early for anything resembling an authentic and reliable estimate to be available. Cold weather was the basis for the adverse crop predictions and the estimates of curtailment ranged from 15 percent to 30 percent less than the Bysački crop in 1928.

Taking the maximum estimate of the 1928 Bysacki, on the basis of the above indicated reductions in the size of the 1929 crop, the production in that year would have ranged 175,000 to 212,500 packages. It would appear that 212,500 packages was probably nearer to the actual production, as the shipments of shellac to the world during 1929 were far in excess of those in 1929. There was no shortage at any time serious enough to have constituted a menace to the maintenance of reasonable stable prices. Furthermore, price movements for practically three-quarters of the year would support the contention that the Bysacki crop of 1929 was not a short one, judged by the idea that a normal output is approximately 175,000 packages, according to views formerly expressed by many trade leaders. In point of fact, it is a very difficult thing to make a conclusive statement as to what is a "normal" Bysacki crop. In all probability, two or three districts contributing to the Bysacki crop did experience a decrease in production due to cold weather and frosts. Whatever curtailment may have occurred was discounted, eventually, by the fact that there was plenty of shellac available at all times.

Advancing prices in New York featured the month of February. During that month, quotations were raised from 41½c. per pound during the first week of that month to 44c. reached in the second. That figure was stabilized to the end of the month. Calcutta quotations began February at 39¾c. per pound, rose to 42¾c. per pound in the second week of the month, and then declined steadily until 41c. was reached by the end of the period. London quotations in February were 42.3c. at the beginning, 44.9c. during the second week, and 40.6c. at the end of the month.

New York quotations were without change throughout March, being 44c. per pound. Calcutta began the month at 40½c., was high at 40⅝c. the second week of the month, and closed the period at 40c. London was noted at 41.9c. at the beginning, was high at 43.2c. per pound for the May delivery during the third week, and ended the month at 41.7c. per pound.

A comparative table of prices for T. N. shellac at London, Calcutta, and New York, quoted in each issue of the reporter during the first quarter of the year, and including the price for bonedry shellac in contrast to the weekly T. N. quotations follows:—

Shellac Prices—First Quarter

Reporter Issue of Jan.—	New York Bone-dry.	New York T.N.	T.N. Calcutta.	T.N. London.	
	Per pound				
7	56c.	43c.	40⅝c.	43.4c.	(Mar.)
14	56c.	43c.	39¾c.	41.7c.	
21	56c.	43c.	38¾c.	42.7c.	
28	56c.	42c.	38⅝c.	41.5c.	
Feb.—					
4	56c.	41½c.	39¾c.	42.3c.	
11	58c.	44c.	42¾c.	44.9c.	
18	58c.	44c.	41½c.	41.8c.	
25	58c.	44c.	41c.	40.6c.	
Mar.—					
4	58c.	44c.	40½c.	41.9c.	
11	58c.	44c.	40⅝c.	42.3c.	
18	58c.	44c.	41c.	43.2c.	(May)
25	58c.	44c.	40c.	41.7c.	

Importations of orange shellac into the United States each month of the first quarter, were as follows:—

	Pounds 1929.	1928.
January	1,924,250	1,884,858
Febrdary	4,201,204	2,248,693
March	2,658,245	1,952,063
Totals	8,783,799	6,075,614

Record of the Second Quarter

Price changes in the second quarter of the year were very narrow. In April, New York quotations dropped 2c. per pound, beginning at 44c., moving to 42c. the next week, and remaining thereat for the rest of the month. Calcutta opened at 39¾, declined to 34¼c. and 39c. in the two succeeding weeks, and closed the period at 40¾c. London was priced at 42.7c. at the beginning of the month, was down to 41.9c. and 41.5c. in the two succeeding weeks, and then reacted to 41.7c. to end the period thereat.

New York quotations during may were stationary at 43c. per pound. Calcutta was 41⅜c. at the beginning, was high at 42⅜c. in the second week, was low at 41c. in the next, and ended the month at 41⅜c., thus showing no net change for the month. London described an almost equally stable market, opening at 44.8c. per pound for the August delivery, reaching a low of 43.9c., and closing at 44.7c., or one-tenth of a cent down on the month.

June quotations in New York were continued at 43c. Calcutta was highest at 40½c. during the first fortnight, touched a low of 39¾c. in the third week, and ended at 40¼c. London showed a net advance of four-tenths of a cent on the month. The opening was 43.6, which was the low for the month, the high was 44.5c., and the close was 44c.

A comparative price tabulation giving quotations in each issue of the Reporter in the second quarter, together with bonedry quotations during the same period follow:—

Shellac Prices—Second Quarter

Reporter Issue of April—	New York Bone-dry.	New York T.N.	T.N. Calcutta.	T.N. London.	
	Per pound				
1	58c.	44c.	39¾c.	42.7c.	
8	56c.	42c.	39¼c.	41.9c.	
15	56c.	42c.	39c.	41.5c.	
22	56c.	42c.	39¼c.	41.7c.	
29	56c.	42c.	40¾c.	41.7c.	
May—					
6	56c.	43c.	41⅜c.	44.8c.	(Aug.)
13	56c.	43c.	42⅜c.	44.6c.	
20	58c.	43c.	41c.	43.9c.	
27	58c.	43c.	41⅜c.	44.7c.	
June—					
3	58c.	43c.	40½c.	43.6c.	
10	58c.	43c.	40½c.	44.5c.	
17	58c.	43c.	39¾c.	43.8c.	
24	58c.	43c.	40¼c.	44c.	

Importations of orange shellac into the United States during the second quarter were as follows:—

	Packages 1929.	1928.
March	3,584,951	1,662,747
April	2,768,675	1,331,923
May	3,048,772	1,613,106
Totals	9,402,378	4,607,776

Record of the Third Quarter

But two quotations for T. N. shellac prevailed in New York in July. They were 43c. and 42c., the latter ruling during the last two weeks of the month. Calcutta was somewhat irregular during the month. Quotations were 40c. early in the period, were high at 41½c., and a subsequent decline brought prices to 40¼c. by the end of the month. London was low at 43.8c. at the end of the month. The opening had been 43.9c. and the highest quotation reached was 45.6c.

August was a period of somewhat higher price levels at New York. The market was 43½c. per pound for the last three weeks of the month, as compared with the opening at 42c. Calcutta underwent fractional fluctuations, beginning at 41¼c., reaching as high as 41⅞c. and closing at 41½c., showing a net advance of ¼c. for the period. London was 44.2c. per pound at the beginning of the month, and barring a minor downward reaction at midmonth, had an upward tendency, closing the period at 43.3c. for the October position.

Quotations had a downward trend during September. The market was 43½c. at the beginning and was 42c. by the close. Calcutta declined from 41¼c. at the beginning, which was high for the period, to 38¾c. per pound, which prevailed as the month passed out.

London declined very sharply. Under pressure, quotations dropped from 44.9c. at the beginning to 41c. at the end. The declines were progressive and were rarely tempered by even moderate and occasional advances.

A comparative tabulation of prices for the third quarter of the year, including those for bonedry shellac, follows:—

Shellac Prices—Third Quarter

Reporter Issue of July—	New York Bone-dry.	New York T.N.	T.N. Calcutta.	T.N. London.	
	Per pound				
1	56c.	43c.	40c.	43.9c.	
8	56c.	43c.	40c.	43.9c.	
15	56c.	43c.	41½c.	45.6c.	
22	56c.	42c.	40½c.	44.5c.	
29	56c.	42c.	40⅝c.	43.8c.	
Aug.—					
5	56c.	42c.	41¼c.	44.2c.	
12	58c.	43½c.	41⅞c.	44.8c.	
19	58c.	43½c.	41⅜c.	44.7c.	
26	58c.	43½c.	41½c.	45.3c.	(Oct.)
Sept.—					
2	58c.	43½c.	41¼c.	44.9c.	
9	58c.	43½c.	40½c.	44c.	
16	58c.	43½c.	40¼c.	43c.	
23	56c.	42c.	39½c.	42.6c.	
30	56c.	42c.	38⅝c.	41c.	

Imports of orange shellac in the third quarter follows:—

	Pounds 1929.	1928.
July	2,527,654	2,511,202
August	3,562,108	2,753,739
September	2,759,201	1,945,493
Totals	8,848,963	7,210,434

Record of the Fourth Quarter

The last quarter of the year was, pricewise, the most active and important of the whole year. More specifically, it was November and December that found the market turned definitely in favor of buyers. Without question, the world-wide liquidation of inflated values, commodities as well as securities being affected, had a pronounced and reactionary effect on the consumption demand for shellac. Almost without exception, the largest consumers of shellac took a highly conservative view of the present and an even more conservative one of the future. Record makers, varnish producers, furniture manufacturers, the button and hat trades, all withdrew from the market, leaving it flat of demand on spot and in the primary market. The withdrawal of buying support was quickly reflected in the price movements during the last two months of the year.

In New York, T.N. quotations were 42c. most of October and 41c. prevailed at the end of the month. Calcutta was 37½c. at the beginning, advanced to a high of 39⅞c. in the third week, and closed at the low for the month, namely, 36¾c. per pound. London advanced from 40.2c. for the December position to high for the month of 41.9c. A decline set prices down to 39.9c. at the close.

The decline at New York in November was from 41c. at the opening to 38c. at the closing of the month; the reduction was progressive. Calcutta quotations began at 36½c., which was high for the period. The low of the month was 33c., quoted in the third week and the close noted an upward swing to 33¾c. London paralleled the Calcutta movement closely. The price at the beginning was 38.2c. per pound. The low was 35.8c. The close was 36.7.

The severest decline came in December, when New York prices broke from 38c. to 33c., Calcutta dropped from 32½c. to 28¾c., and London was off from 35.8c. early in the month to 31c. at the end. Incidentally, the lowest quotation from Calcutta during this decline was 28½c. per pound, at which business was done. The March position was first quoted during the week of December 16, coming out at 32.3c.

The tabulation of comparative shellac prices, together with those for bonedry shellac, during the last quarter of the year, follows:—

Shellac Prices—Fourth Quarter

Reporter Issue of Oct.—	New York Bone-dry.	New York T.N.	T.N. Calcutta.	T.N. London.	
	Per pound				
7	54c.	42c.	37½c.	40.1c.	
14	54c.	42c.	38½c.	41.2c.	(Dec.)
21	54c.	42c.	39⅞c.	41.9c.	
28	54c.	41c.	36¾c.	39.9c.	
Nov.—					
4	54c.	41c.	36½c.	38.2c.	
11	52c.	39c.	34c.	36.7c.	
18	52c.	39c.	33c.	35.8c.	
25	52c.	38c.	33¾c.	36.7c.	
Dec.—					
2	52c.	38c.	32½c.	35.8c.	
9	52c.	35c.	32½c.	35c.	
16	50c.	35c.	33.2c.	31.2c.	
23	50c.	35c.	30½c.	32.3c.	(Mar.)
30	47c.	33c.	28¾c.	31c.	

Importations of orange gum during the final quarter of the year were as follows:—

	Pounds 1929.	1928.
October	4,674,309	4,116,076
November	1,823,745	2,096,807
December	.....	.....
Totals	.....	.....

A tabulation of shellac importations during the period January-November, 1929, including orange gum, seedlac, buttonlac, and sticklack, by months follows:—

	Pounds Orange lac.	Button lac, Seedlac, Sticklac.
January	1,924,250	691,904
February	4,201,204	701,672
March	2,658,245	568,097
April	3,584,951	558,730
May	2,768,655	720,051
June	3,048,772	668,402
July	2,527,654	753,471
August	3,562,108	1,116,350
September	2,759,201	478,978
October	4,674,309	1,265,114
November	1,823,745	535,172
Totals	31,709,349	7,560,729

Last year was the first in which the Department of Commerce divided its import statistics into two parts; orange gum totals were provided separately from those for buttonlac, seedlac and sticklac. In previous years, all had been lumped.

Exports of shellac, all kinds, from Calcutta to the United States, United Kingdom, Continent and all other ports during the period January through November, 1929, obtained from official clearances from the port of Calcutta, were as follows:—

World Exports from Calcutta 11 Months—1929

	Packages* Orange lac.	Garnet lac.	Button lac.	Stick-lac.	Seed-lac.	Refuse lac.
U. S.	149,684	10,127	1,794	400	31,017	502
U. K.	73,481	4,176	6,060	683	4,917	227
Cont.	54,715	2,506	1,968	1,130	1,793	57,428
O. P.	29,434	729	429	2	4	1
Totals	307,314	17,538	10,251	2,215	37,731	58,158

* A package contains 164 pounds.

Shellac imports throughout the world were larger last year in comparison with 1928. The following tabulation would suggest that consumption in 1929 had reached a high total:—

	Packages 1929.	1928.	1927.	1926.
Orange	307,314	276,596	224,809	271,680
Garnet	17,538	13,076	14,283	13,279
Button	10,251	10,510	5,872	11,711
Seedlac	37,731	52,515	*	*
Sticklac	2,215	8,599	*	*
Refuse lac	58,158	46,276	*	*
Totals	433,207	407,572		

* Not available.

Bonedry Shellac

Something may be said separately as concerns the bonedry shellac market during the year. During January, February, and March, the manufacturers of bleached (bonedry) shellac maintained a schedule of price differentials. Separate quotations were provided according to set and specified quantities. For example, quotations for bonedry during the first week in January were as follows:—

	Per pound
100 barrels, or more	56c.
50 to 90 barrels	57c.
10 to 49 barrels	58c.
1 to 9 barrels	59c.

This was as per the scheme developed when the manufacturers began to operate as an open price group, within the American Bleached Shellac Manufacturers' Association, in 1928.

The practice was discontinued during the week of April 1. For reasons not disclosed, the associated manufacturers did away with price differentials. They replaced them with a single quotation which was to prevail, according to official statement, on any and all quantities of bonedry shellac. A single barrel buyer was supposed to pay as little as the buyer of 100 barrels or more on contract. The one price arrangement went into effect during the first week in April, being set at 56c. It is clear that under this scheme the single barrel buyer saved 3c. per pound; the ten barrel buyer, 2c.; the fifty barrel buyer, 1c.; only the quantity buyer failed to make a substantial saving.

This plan remained in effect until the turn of the year when the association re-established a system of differentials. The following is a sample of the new differentials, quoted during the first week in January:—

	Per pound.
100 barrels, or more	44c.
25 to 99 barrels	45c.
1 to 24 barrels	46c.

Parallel with this change came a division of national trade in shellac varnish into two parts. Two zones were established. One was known as the Metropolitan area, which in effect meant the City of Greater New York. The other was called Zone A and was composed of the rest of the country. A sharp differential in price was named. It was clear that special conditions in Greater New York were being given special, remedial treatment. The following was a comparative statement of zone prices under this scheme:—

	Per gal. Metropolitan area.	Zone A.
5-pound white	$2.05	$2.25
4½-pound white	1.95	2.15
4-pound white	1.80	2.00
3½-pound white	1.70	1.90

Another feature in the bonedry shellac market was the wide spread in prices for that article as compared with the spot and Calcutta quotation for T. N., a condition obtaining toward the end of the year. The difference between the bonedry price and that for T. N. at New York or Calcutta in the past has been sufficient to cover the cost of bleaching plus a reasonable profit. It had more often been about 12c. per pound. The following tabulations makes specific an interesting situation:—

Reporter issue of—	Cents per pound New York Bonedry.	New York T.N.	Bonedry premium.
January 7	56	43	13
April 8	56	42	14
July 8	56	43	13
October 7	54	42	12
November 4	54	41	13
December 9	52	35	17
December 30	47	33	14

These premiums may be compared with that prevailing at a remote period when the bleached manufacturers were not working under an open price association. On December 24, 1921, the quotation for bonedry shellac was 75c., that for T. N., spot, was 65c., the premium of bonedry prices over those for T. N. was, therefore, 10c. per pound. It can thus be seen that a change in differentials has been established and that in early December, 1929, the differential had become exceedingly great. In the same issue of the Reporter, December 9, the premium of spot bonedry prices over those at Calcutta was as much as 19½c. per pound.

A final feature of the year so far as bonedry shellac was concerned was the effective work done by a shellac research scholarship supported by the American Bleached Shellac Manufacturers' Association in the Brooklyn Polytechnic Institute, and the national advertising campaign waged by the association with a view to increasing the use of shellac.

During the greater part of the year the research workers labored in the relm of pure science, seeking to find out exactly what shellac is. Late in the year the association decided to turn the research work from the purely scientific to the practical. It laid down practical problems that affect the business of the whole trade, outlined an extensive course of investigation, and set out on a utilitarian project which was expected to aid all members.

Increasing the use of shellac was the purpose back of a national advertising campaign carried on in journals covering the numerous consuming industries of the nation. This was backed up with circular distribution as a supporting element. If consumption of shellac be an indicator of the success of this advertising venture, then the success has been very great. Consumption of shellac in all forms was far greater in 1929 than it had been in 1928, and was, in fact, one of the outstanding and important developments in the year under review.

Gums, Shellacs, Waxes: Record of Prices

Gums

Aloe, Curacao, Cases

November 22, 1871, the price was 20c. to 21c.; October 18, 1881, 13c. to 15c.; 1891, 2½c. to 5c.; 1901, 3¾c. to 4¼c.; 1911, 7¼c. to 7½c.; 1913, 8c. to 8½c.; 1918, April, 11c.

(In cases)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.12	$0.11½	$0.20	$0.19
February	.12	.12	.20	.20
March	.13	.12	.20	.20
April	.14	.13	.24½	.20
May	.16	.16	.24½	.24½
June	.16	.16	.24½	.24½
July	.16	.16	.25	.24½
August	.16	.16	.25	.25
September	.16	.16	.25	.25
October	.16	.16	.25	.25
November	.17	.16	.25	.25
December	.19	.17	.25	.24
Year	.19	.11½	.25	.19

Twenty Years' Prices

	H.	L.
1929	$0.25	$0.19
1928	.19	.11½
1927	.12	.10
1926	.10½	.09
1925	.11	.10
1924	.11	.07½
1923	.10½	.06
1922	.07½	.06
1921	.08½	.06
1920	.10	.08½
1919	.10	.08
1918	.10	.08
1917	.09½	.08
1916	.14	.09
1915	.15	.11½
1914	.16	.08
1913	.11	.06½
1912	.11½	.07¾
1911	.08	.06½
1910	.08¾	.06¾

Arabic, Cleaned Amber, Sorts

October 18, 1871, the price was 19c. to 21c.; 1881, 10½c. to 12½c.; 1891, 2¾c. to 25c.; 1901, 13c. to 26c.; 1911, 11½c. to 11¾c.; 1913, 8½c. to 9c.; 1917, October, 33c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10¾	$0.10½	$0.12	$0.11
February	.10½	.10½	.13	.12
March	.10½	.10½	.14½	.14
April	.10½	.10	.15⅛	.13
May	.10	.09¾	.19	.15½
June	.10	.09¾	.21	.19
July	.11	.09¾	.23	.21
August	.11	.11	.26	.24
September	.11	.10¾	.29	.28
October	.10¾	.10¾	.29	.29
November	.11¼	.10¾	.29	.26
December	.11¼	.11	.25	.22
Year	.11¼	.09¾	.29	.11

Sixteen Years' Prices

	H.	L.
1929	$0.29	$0.11
1928	.11¼	.09¾
1927	.11½	.10
1926	.13¾	.11½
1925	.13¾	.12¾
1924	.14	.11¾
1923	.21½	.12½
1922	.16	.10
1921	.13	.09½
1920	.16	.13
1919	.23	.14½
1918	.32	.24
1917	.33	.16
1916	.25	.15
1915	.23	.11½
1914	.20	.08½

Asafetida, Lump

October 18, 1871, the price was 55c.; 1881, 13c. to 14c.; 1891, 11c. to 15c.; 1901, 26c. to 30c.; 1911, 75c. to $1.25; 1913, 30c.; 1919, June, $6.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.29	$0.29	$0.22	$0.22
February	.29	.27	.22	.22
March	.27	.27	.22	.22
April	.27	.27	.22	.22
May	.27	.25	.22	.22
June	.25	.25	.22	.22
July	.25	.25	.22	.22
August	.25	.24	.25	.22
September	.24	.24	.25	.25
October	.24	.24	.25	.25
November	.24	.24	.25	.25
December	.24	.24	.25	.25
Year	.29	.24	.25	.22

Camphor, American, Refined, Lump

October 18 1871, the price was 69½c. to 70c.; 1881, 24½c. to 25c.; 1891, 43c.; 1901, 57c. to 57½c.; 1911, 45c. to 46c.; 1913, 42¼c.; 1919, September, $3.30; 1924, 93c.; 1928, *66c.

* Due to the inability of American refiners to obtain crude camphor, save at very high prices because of Japan's policy of selling only refined camphor, the domestic refining of camphor stopped permanently in August, 1928.

Camphor, Japan, Refined, Slabs

October 18, 1871, the price was 69½c. to 70c.; 1881, 24½c. to 25c.; 1891, 43c.; 1901, 57c. to 57½c.; 1911, 45c. to 46c.; 1913, 42½c. to 46c.; 1919, October, $3.65.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.57	$0.57	$0.62	$0.59½
February	.65	.57	.62	.62
March	.65	.65	.62	.62
April	.65	.64	.60	.60
May	.63	.62	.60	.60
June	.62	.62	.60	.60
July	.62	.60	.60	.59
August	.60	.60	.62	.59
September	.60	.60	.64	.62
October	.60	.58½	.64	.64
November	.60	.58½	.64	.64
December	.60	.59½	.64	.63
Year	.65	.57	.64	.59

Myrrh

October 18, 1871, the price was 42c. to 46c.; 1881, 27c. to 30c.; 1891, 16c. to 40c.; 1901, 12c. to 25c.; 1911, 13c. to 18c.; 1913, 13c. to 16c.; 1919, February, $1.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.60	$0.60	$0.55	$0.55
February	.65	.60	.55	.40
March	.70	.70	.42	.42
April	.80	.70	.40	.38
May	.85	.80	.38	.35
June	.85	.85	.35	.35
July	.85	.85	.35	.35
August	.85	.85	.35	.33
September	.85	.85	.33	.33
October	.85	.70	.33	.33
November	.70	.55	.33	.33
December	.55	.53	.38	.33
Year	.85	.53	.55	.33

Tragacanth, Aleppo, No. 1

October 18, 1871, the price was 60c. to 82½c.; 1881, 40c. to 75c.; 1891, 24c. to 48c.; 1901, 60c. to 65c.; 1911, 35c. to 77c.; 1913, $1.25 to $1.30; 1920, March, $5.25.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.55	$1.55	$1.55	$1.55
February	1.55	1.55	1.55	1.55
March	1.55	1.55	1.55	1.55
April	1.55	1.55	1.55	1.28
May	1.55	1.55	1.28	1.28
June	1.55	1.55	1.28	1.28
July	1.55	1.55	1.28	1.28
August	1.55	1.55	1.28	1.28
September	1.55	1.55	1.28	1.28
October	1.55	1.55	1.28	1.28
November	1.55	1.55	1.28	1.28
December	1.55	1.55	1.28	1.28
Year	1.55	1.55	1.55	1.28

Waxes

Beeswax, African

May 29, 1872, the price was 31c. to 32c.; October 18, 1881, 23c. to 24c.; 1891, 22c. to 24c.; 1901, 33c. to 35c.; 1911, 32c. to 33c.; 1913, 34c. to 35c.; 1918, November, 47c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.36	$0.36	$0.36	$0.36
February	.36	.36	.36	.36
March	.36	.36	.36	.34½
April	.36	.36	.34½	.34
May	.37	.36	.34	.34
June	.37	.37	.34	.33½
July	.36	.36	.33½	.33½
August	.36	.36	.33	.33
September	.36	.36	.33	.33
October	.36	.36	.33	.33
November	.36	.36	.33	.33
December	.36	.36	.33	.32
Year	.37	.36	.36	.32

Beeswax, Refined

May 29, 1872, the price was 60c. to 65c.; October 18, 1881, 30c. to 41c.; 1891, 40c. to 45c.; 1901, 38c. to 50c.; 1911, 34c. to 36c.; 1913, 36c. to 37c.; 1918, November, 50c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.42	$0.42	$0.41	$0.41
February	.42	.42	.41	.41
March	.42	.42	.41	.41
April	.42	.42	.41	.41
May	.42	.41	.41	.41
June	.41	.41	.38	.38
July	.41	.41	.38	.38
August	.41	.41	.38	.38
September	.41	.41	.38	.38
October	.41	.41	.38	.38
November	.41	.41	.38	.38
December	.41	.41	.38	.37
Year	.42	.41	.41	.37

Carnauba, N.C. No. 3

January 8, 1872, the price was 14c. to 16c.; October 18, 1891, 15c. to 20c.; 1901, 12c. to 13½c.; 1911, 37c. to 38c.; 1913, 33c. to 33½c.; 1918, June, 81c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.29	$0.28	$0.25½	$0.25
February	.29½	.28	.25	.24½
March	.30	.28	.24½	.24
April	.30	.30	.25	.25
May	.30	.30	.25	.25
June	.30	.29	.25	.24½
July	.28	.28	.24½	.24½
August	.28	.26	.25	.25
September	.27	.26	.25	.24
October	.26	.25½	.24	.23½
November	.25	.25	.24½	.24½
December	.25½	.25	.24½	.23
Year	.30	.25	.25½	.23

Japan

January 12, 1881, the price was 15c. to 16c.; October 18, 1881, 12½c. to 13c.; 1891, 9c. to 10c.; 1901, 7¼c. to 7½c.; 1911, 8½c. to 8¾c.; 1913, 9c. to 9¼c.; 1918, September, 27½c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.19	$0.18½	$0.18½	$0.17½
February	.18½	.18	.17½	.17
March	.18	.17½	.17	.17
April	.18	.17½	.17	.16¾
May	.17½	.17½	.16¾	.16
June	.17½	.17½	.16½	.16
July	.17	.17	.17	.16½
August	.17¾	.17	.17	.16½
September	.17¾	.17¾	.16½	.16
October	.20	.17¾	.16½	.16
November	.20	.19	.15¾	.15¾
December	.19	.18½	.15¾	.15¾
Year	.20	.17	.18½	.15¾

Shellac

Shellac, D.C.

August 22, 1877, the price was 26c.; 1881, 38c. to 39c.; 1891, 30c. to 31c.; 1901, 33c. to 34c.; 1911, 22c. to 23c.; 1913, 27c. to 28c.; 1920, July, $1.75.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.66	$0.63	$0.58	$0.58
February	.62	.60	.61	.58
March	.60	.60	.61	.61
April	.61	.61	.61	.61
May	.62	.61	.61	.61
June	.62	.62	.61	.60
July	.66	.62	.60	.60
August	.61	.60	.60	.60
September	.62	.60	.60	.60
October	.62	.60	.60	.59
November	.60	.60	.59	.59
December	.62	.58	.59	.57
Year	.66	.58	.61	.57

Shellac, T.N.

October 18, 1871, the price was 31c. to 42c.; 1881, 29c. to 30c.; 1891, 21c. to 23c.; 1901, 23c. to 25c.; 1911, 14c. to 14½c.; 1913, 21½c. to 23c.; 1920, January, $1.60.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.52	$0.49	$0.43	$0.42
February	.43	.41½	.44	.41½
March	.42	.40	.44	.44
April	.43½	.43	.44	.42
May	.47	.45	.43	.43
June	.44½	.44	.43	.43
July	.53	.44½	.43	.42
August	.47	.45	.43½	.42
September	.47	.45	.43½	.42
October	.47	.45	.42	.41
November	.47	.44	.44½	.43
December	.46	.43	.38	.33
Year	.53	.40	.44½	.33

Twenty-nine Years' Prices

	H.	L.
1929	$0.44½	$0.33
1928	.53	.40
1927	.58	.37
1926	.48	.24½
1925	.62	.45
1924	.65	.52
1923	.81	.51
1922	.82	.54
1921	.70	.44
1920	1.60	.65
1919	1.50	.46
1918	.68	.57
1917	.60	.39
1916	.39	.20
1915	.21	.13½
1914	.21	.14
1913	.23½	.16½
1912	.16½	.13½
1911	.18	.13½
1910	.19½	.14
1909	.20½	.14
1908	.20	.20
1907	.48	.26
1906	.50	.42
1905	.46	.42
1904	.52	.42
1903	.52¾	.26½
1902	.40	.24
1901	.30	.14
1900	.15	.14½

Shellac, Bleached, Bone Dry

	1928. 10⅓-bbl. lots H.	1928. 10⅓-bbl. lots L.	1929. 100-bbl. lots. H.	1929. 100-bbl. lots. L.
January	$0.59	$0.56	$0.56	$0.56
February	.54	.49	.58	.56
March	.50	.47	.58	.58
April	.56	.49	.58	.56
May	.55	.55	.58	.56
June	.54½	.54½	.58	.58
July	.60½	.54½	.56	.56
August	.59½	.57½	.58	.56
September	.59	.55	.58	.56
October	.59	.57	.54	.54
November	.57	.55	.52	.52
December	.57	.55	.52	.47
Year	.60½	.47	.58	.47

Twenty-two Years' Prices

	H.	L.
1929	$0.58	$0.47
1928	.60½	.47
1927	.66	.45
1926	.58	.32½
1925	.73	.55
1924	.73	.63
1923	.95	.63
1922	.94	.72
1921	.80	.53
1920	1.75	.80
1919	1.70	.56
1918	.79	.64
1917	.60	.39½
1916	.31	.34
1915	.24	.17½
1914	.27	.18½
1913	.27	.21
1912	.21	.19
1911	.26	.19
1910	.26	.20
1909	.25	.20
1908	.28	.20

Lime Sales in 1929

Sales of lime by producers in the United States in 1929 amounted to 4,260,000 short tons, valued at $33,387,000, according to estimates furnished by lime manufacturers to the United States Bureau of Mines, Department of Commerce. This is a decrease of 4 percent in quantity and 8 percent in value as compared with sales of 4,458,412 tons, valued at $36,449,635, in 1928. Estimated sales of hydrated lime, which are included in these figures, amounted to 1,527,000 tons, valued at $12,566,000, a decrease of 5 percent in quantity and 7 percent in value from 1,612,818 tons, valued at $13,540,215, in 1928. The average unit value of all time showed a decrease from $8.18 a ton in 1928 to $7.84 in 1929.

There was a general report of poor demand for lime in 1929, especially for the lime sold for construction, and to a less extent for agricultural lime. Demand for chemical lime, although in some cases reported as poor, was reported by the larger number of producers as the same or better than in 1928. Lower or the same prices were reported by the larger number of producers, with a few reports of higher prices.

Sales of lime in 1929 for construction are estimated at 1,760,000 tons, compared with 1,986,465 tons, valued at $17,706,420, in 1928; for agriculture the sales are estimated at 300,000 tons in 1929, against 333,910 tons, valued at $2,287,558, in 1928. Sales of chemical lime are estimated at 2,220,000 tons for 1929, compared with 2,138,037 tons, valued at $16,455,657, in 1928. Included in the estimated sales of chemical lime in 1929 are sales of refractory lime (dead-burned dolomite) amounting to 483,000 tons, valued at $3,857,000. In 1928 this product amounted to 448,761 tons, valued at $4,283,036.

Out of the twenty-three States leading in production of lime in 1929, twelve showed decreased output, eight increased output, and three showed an output of practically the same as 1928. Of these same States nineteen showed a decrease in value and four an increase in value as compared with 1928.

Ohio, the leading State, and Pennsylvania, the second State in lime production, apparently each decreased in production by 6 percent. There was a decrease of 9 percent indicated in the output of hydrated lime in Ohio and of 5 percent in Pennsylvania.

The accompanying table shows the estimated sales of lime by producers in 1929, by States:—

	Total lime. Short tons.	Total lime. Value.	Hydrated lime. Short tons.
Ohio	956,000	$7,800,000	614,000
Pennsylvania	780,000	5,800,000	260,000
Missouri	314,000	2,262,000	107,000
West Virginia	312,000	1,860,000	44,000
Alabama	200,000	1,400,000	35,000
Tennessee	175,000	1,096,000	47,000
Virginia	154,000	1,047,000	* 50,000
Wisconsin	136,000	1,132,000	12,000
Massachusetts	132,000	1,486,000	17,000
Illinois	121,000	995,000	36,000
New York	107,000	898,000	46,400
Indiana	107,000	688,000	47,000
Michigan	104,000	931,000	17,000
Maine	92,000	806,000	*
Texas	90,000	745,000	39,500
Maryland	55,000	410,000	35,000
Vermont	52,000	487,000	9,200
Arizona	50,000	473,000	*
California	47,000	492,000	10,000
Utah	46,000	365,000	*
Arkansas	34,000	283,000	6,300
Connecticut	32,000	360,000	*
Washington	32,000	321,000	3,400
Undistributed	132,000	1,250,000	91,200
Totals	4,260,000	$33,387,000	1,527,000

* Included under "Undistributed."

German Potash Sales

Sales of potash salts by the German syndicate in 1929 were equivalent to a total of 1,401,446 metric tons of pure potash (K_2O), compared with 1,421,216 tons in 1928 and 1,239,646 tons in 1927. According to information sent to the Department of Commerce, by the trade commissioner at Berlin, monthly sales in the past two years compared as follows:—

	Metric tons 1929.	Metric tons 1928.
January	164,736	202,010
February	144,676	208,400
March	233,060	161,460
April	112,535	67,414
May	77,326	63,746
June	97,723	99,948
July	80,190	102,608
August	95,372	108,696
September	123,465	140,817
October	79,159	76,507
November	84,670	82,463
December	99,594	107,146
Totals	1,401,446	1,421,216

French production of potash was equivalent to 490,000 tons of K_2O in 1929, an increase of 17 percent over 1928.

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1,066,720	1,113,971	1,146,142	1,172,773	1,328,080	1,613,560
1,069,056	1,113,972	1,146,854	1,185,641	1,394,664	1,613,561
1,069,057	1,118,482	1,147,848	1,189,803	1,406,175	1,618,866
1,079,635	1,118,642	1,147,849	1,189,804	1,446,872	1,618,867
1,082,507	1,129,770	1,147,850	1,202,040	1,446,873	1,618,868
1,083,007	1,130,499	1,147,851	1,229,247	1,446,874	1,620,409
1,084,201	1,139,353	1,147,852	1,235,721	1,498,781	1,646,280
1,095,270	1,140,449	1,160,394	1,274,430	1,498,782	1,646,281
1,100,177	1,143,110	1,167,640	14,562	1,499,101	1,647,399
1,102,330	1,143,111	1,167,641	1,302,905	1,596,413	1,691,771
1,113,964	1,143,130	1,169,783	1,306,221	1,606,618	

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Paint and Varnish Materials: Market Review

A rather severe decline in building construction throughout the country had a direct reflection in the consumption of paint and varnish raw materials in 1929. While markets were more stabilized and prices yielded a much more satisfactory return than in 1928, the trade was irregular, admittedly but slightly more voluminous than the preceding year and far apart from the peak established in 1927. The opening six months of the year witnessed a heavy outflux of supplies and the year seemed destined for record attainments but business during the last half and particularly in the final quarter, slowed up sufficiently to offset the earlier expansion and hold the aggregate for the year within closer bounds. As indicated by the Oil, Paint and Drug Reporter index number, the price trend was steadily upward, but failed to reach the heights of the 1928 opening. The index number stood at 155.6 at the close of 1929, compared with 150.8 at the opening and 152.0 at the beginning of 1927.

Motivated by the "merger movement" in general industry, combinations of manufacturing and distributing resources were numerous. A visible improvement of selling ethics as a result of closer associational spirit among the manufacturers was another of the salient events allied with the constructive progress of 1929. Notwithstanding this trend, the element of competition was still a disturbing factor in the trade, as the shattered price structure of carbon black and several spirit soluble varnish gums will attest, but the acidity of its nature was somewhat neutralized.

The value of paint, varnish and lacquer output during the first ten months of the year showed a comfortable margin of increase over the corresponding period of 1928, according to the Department of Commerce, particularly in industrial sales which include shipments to railroad, government, manufacturing and marine lines of outlet. The major portion of this increase, however, was due to the advanced price for mixed paints which was effected in the Summer to follow the wild rise in the price of linseed oil.

The trade clung to its seemingly established policy of operating on a month-to-month basis against annually entered contracts, which in the case of several dry colors, proved more advantageous than to operate in the spot market and hope for whatever downward developments that might occur from agitated competition. The distribution of dry color supplies last year was remarkably good, mainly by virtue of the diversified line of outlet. Of prominent interest was the broadly extended use of colored cements and colored tiling last year, which together with the increased use of color work in the printing and lithographing trades proved to be quite an exhilarating spur to trade. As in the case of red lead for protective coatings, the use of black oxide of iron on metal finishes was augmented in reflection of the wide program of public utility construction conducted during the year. Interest in pigment colors and some of the fine lakes showed a normal growth over the year; chrome colors were again leaders in their class. One definite trend in the dry color industry last year was the increasing preference for the lighter colors. Light greens, blues and yellows and lake reds were the predominating shades on dye color cards throughout the year.

At the close of the year the status of the pigment division of the market was not materially different from its closing position a year ago. Lithopone, barytes and zinc oxide prices were repeated and lead oxides which had shown consistent improvement until the advent of the Wall Street crash, closed the year without gain. The position of the latter products was seriously weighted by gross over-production of the basic raw material and although prices for the major portion of the year were markedly above the levels of the preceding twelve months and were close to a parity with the high position of 1927, the break-up of the securities market and financial structure of the country in October caused an immediate recessionary action.

The entire line of spirit soluble varnish gums was subject to virtual uninterrupted precipitation of values. The buying trade tenaciously adhered to its previous policy of ordering only as needed, which induced more spirited competition for the available business and consequent easing of prices. The sale of fillers last year was not very pleasing to the supplying factors. The growing demand for quality paints only, seriously cut into the use of some of the cheaper commodities. Mineral thinners were normal and under firm price control throughout the year.

Generated by the approximate production of 5,400,000 automotive vehicles in the country during the past year, lacquer consumption jumped to record proportions. However, the perfection of fast drying varnishes and enamels, made possible by the evolution of synthetic gums, continued to replace to a great extent the nitrocellulose brushing lacquers in domestic and retail avenues of use. The forecasts given at the beginning of the year for growing attention and exploitation of four-hour drying varnishes, were well justified and fulfilled, and, even further importance of quick drying and easy applicable finishes is expected by the trade in 1930.

Comparative Values

Index numbers for 1929, compiled from eleven typical paint and varnish materials, on the basis of a normal 100 for August, 1914, with comparison for the previous year, compares as follows:—

	1929.	1928.
January 1	150.8	152.0
April 1	153.8	151.7
July 1	155.6	151.4
October 1	155.6	181.1
December 31	155.6	150.8

Less Construction

Indications given at the close of 1928 that the peak of the building movement was over and that appreciable declines were expected in some sections of the country, were fulfilled when the total figures for 1929 were compiled, showing building construction sharply off from the boom figures of the previous year. In his annual report to the President, the Secretary of Commerce stated:—"The decline was confined largely to residential buildings, the contracts for commercial, industrial and public buildings showing a considerable increase. The twelve-month (fiscal) period was notable for the initiation of a considerable number of large bridge and other engineering construction projects, including several large pipelines from the Southern and Southwestern gas and oil-producing fields to areas farther North, including Denver and Chicago. . . . In the closing months of the fiscal year of 1927-1928 letting of building contracts proceeded in larger volume than in any corresponding previous period. Some reaction followed at various points where speculative or operative builders had overanticipated the actual demand for certain classes of structures."

Construction contracts recorded during the year 1929 in the thirty-seven Eastern States reached a total of $5,754,290,500, according to F. W. Dodge Corporation. Compared with the total for the record year 1928, this was a decrease of 13 percent. Commercial and industrial building reached a combined total of $1,689,200,800 last year, an increase of 11 percent over 1928. These classes of work usually increase when general business activity and the stock market are on the upswing. Public and institutional buildings of all kinds (constituting the remainder of the non-residential classes) amounted to $901,020,200 last year, representing an 8 percent decrease from 1928. Non-residential building as a whole had contract expenditures just 3½ percent above those of 1928.

The decline was most severe in residential building. The 1929 total was $1,915,727,500, being 31 percent under the 1928 total. Even public works and utilities, contracts for which kept somewhat ahead of 1928, very nearly to the end of the year, finished with a contract total 7 percent under that of 1928, or $1,248,342,000, compared with $1,337,930,500.

The volume of contracts let for new work during the past year in the metropolitan district of New York amounted to $1,233,173,100. The above figure was 21 percent under the unusually high total for 1928, but there was only a drop of 11 percent when compared with the 1927 contract total.

Analysis of the year's construction total showed that the commercial, industrial and educational classes of work were well ahead of both their 1928 and 1927 totals. Public works and utilities were below 1928 and a little ahead of 1927, but residential building was considerably less than the 1928 and 1927 records.

The table below gives the direct comparison:—

	Thousands of dollars		
	1929.	1928.	1927.
Commercial	$262,600	$232,895	$247,704
Industrial	54,232	35,017	33,295
Educational	73,816	71,784	52,361
Residential	547,333	863,276	760,537
Public works and utilities	205,639	230,395	190,515
Other classes	89,553	102,309	108,207
Totals	$1,233,173	$1,555,676	$1,392,619

New construction work started in the metropolitan district during December, 1929, reached a total of $105,728,500, compared with $149,884,400 for November, 1929, and $125,015,800 for December, 1928.

While contracts kept falling off, contemplated new work reported continued at a high level, and the year's total closed amounting to $2,400,389,800, against $2,409,582,800 for the year 1928.

During the last few months of 1929 there were several large projects proposed, for which work is likely to start on some time this year. Here are some of the big jobs reported:—The Rockefeller development project, involving hotels, apartments, stores, offices, etc., and amounting to $98,000,000. The Tri-Boro Bridge, linking Queens, Manhattan and the Bronx, and costing in the neighborhood of $25,000,000 (a small contract has already been awarded on this item, and more contracts will be let through this year). Another important linking project reported is the $60,000,000 Liberty Bridge to be erected across the Narrows and connecting Kings and Richmond. In addition to the above-mentioned jobs there are several large subway and other public work contracts that are likely to be awarded during this year.

During the closing month of 1929 contracts let in New York State and Northern New Jersey amounted to $115,187,900. The December total was off 31 percent from the preceding month and was 17 percent less than the total for December, 1928. The classes of building found to be most active in the month were the following:—$69,544,000, or 60 percent of all construction, for residential buildings; $10,324,300, or 9 percent, for educational buildings; $9,947,900, or 8 percent, for commercial buildings, and $7,507,300, or 7 percent, for public works and utilities.

New building and engineering work contracted for in the entire year of 1929 amounted to $1,467,272,600, compared with $1,814,316,800 for 1928, a decrease of 19 percent.

Contemplated projects as reported during the past month reached a sum of $287,813,600. This figure was 25 percent ahead of November, and a further increase of 48 percent was registered over the December month of 1928.

December construction contracts let in the New England States amounted to $15,946,000. This figure was 34 percent under the total for the preceding month, and there was a decrease of 43 percent from the corresponding month of 1928. Analysis of the December building and engineering record showed the following active classes:—$6,020,800, or 38 percent, of all construction, for residential buildings; $3,672,600, or 23 percent, for public works and utilities; $2,894,800, or 18 percent, for commercial buildings, and $1,545,200, or 10 per cent, for educational buildings.

The year 1929 closed with a total construction volume of $398,382,400, compared with $495,581,000 in the year 1928, a decrease of 20 percent.

New construction work reported in the contemplated stage for December amounted to $47,938,900, representing increases of 63 percent over November and 26 percent over December, 1928.

The December contract total for the Atlantic States brought the amount of construction started in this district during the year up to $671,500,300, which represents a drop of 15 percent from the 1928 year total.

Contemplated work reported last month amounted to $109,917,600. An increase of 35 percent was recorded over the preceding month's total, but a loss of 19 percent was noted from the December, 1928, record when compared.

The Pittsburgh District (Western Pennsylvania, West Virginia, Ohio and Kentucky) had $27,332,000 in awarded contracts for new construction work during December. This figure was a little more than 2 percent over the preceding month's total but was off 30 percent from the corresponding month of 1928. Last month's construction record included the following items of note:—$9,913,800, or 36 percent of all construction, for public works and utilities; $5,898,800, or 22 percent, for residential buildings; $3,725,000, or 14 percent, for industrial plants, and $3,634,600, or 11 percent, for commercial construction.

The cumulative total of all construction contracted for in the 1929 year was $685,535,500 compared with $723,415,700 during the year 1928, which was a decrease of only 5 percent.

December construction contracts awarded in the Central West (Illinois, Indiana, Iowa, Wisconsin, Southern Michigan, Missouri, Kansas, Oklahoma, and Nebraska) shows a substantial increase over November but a decrease from the preceding December. Last

Detailed Forecast of New Building Construction in 1930

BUILDING TYPES	N. EASTERN STATES	N. ATLANTIC STATES	S. EASTERN STATES	S. WESTERN STATES	MIDDLE STATES	WESTERN STATES	U. S. A.
Automotive	$23,361,800	$47,580,500	$6,519,000	$18,978,900	$56,575,900	$16,859,200	$169,875,300
Banks	37,806,100	31,602,800	2,029,500	10,688,700	48,515,300	7,281,600	137,924,000
Apartments	27,765,200	325,954,100	9,114,300	26,026,800	95,407,000	68,355,200	552,622,600
Apartment Hotels	2,980,700	65,050,600	8,466,500	24,571,300	73,156,300	36,367,000	210,592,400
Clubs, Fraternal, etc.	5,797,400	44,653,100	2,242,700	17,978,500	75,891,000	15,243,800	161,806,500
Community and Memorial	6,437,000	26,486,000	861,000	5,608,800	26,670,500	26,752,500	92,815,800
Churches	12,685,400	44,665,400	30,262,100	34,784,400	70,876,700	23,993,200	217,267,200
Dwellings (Below $20,000)	24,751,700	33,968,500	10,245,900	11,676,800	41,323,900	15,846,500	137,813,300
Dwellings ($20,000 to $50,000)	11,877,700	44,362,000	8,269,700	9,983,500	45,628,900	15,571,800	135,693,600
Dwellings (Over $50,000)	13,300,400	39,524,000	6,642,000	6,810,100	34,739,300	11,041,300	112,057,100
Hotels	13,919,500	78,941,400	31,910,300	76,711,000	87,649,800	104,468,000	393,600,000
Hospitals	33,488,800	161,523,600	11,500,500	46,649,800	94,025,300	24,190,000	371,378,000
Industrial	14,358,200	58,634,100	23,985,000	21,381,500	141,060,500	29,725,000	289,144,300
Office Buildings	56,662,000	250,788,800	1,107,000	41,922,500	255,930,200	72,426,500	678,837,000
Public Buildings	14,296,700	88,182,800	7,293,900	18,876,400	146,062,500	44,062,700	318,775,000
Schools	47,855,200	188,395,000	30,053,000	77,174,300	223,003,100	74,374,000	640,854,600
Stores	15,485,700	74,136,200	8,790,400	10,282,800	43,726,500	14,509,900	166,931,500
Theatres (All Types)	11,808,000	21,250,300	10,036,800	15,260,200	30,167,800	9,056,900	97,580,000
Welfare Y.M.C.A. etc.	29,151,000	59,749,300	5,817,900	8,581,300	34,517,900	5,510,400	143,327,800
TOTAL VALUE OF NEW BUILDINGS	$403,788,500	$1,685,448,500	$215,147,500	$483,947,600	$1,624,928,400	$615,635,500	$5,028,896,000

New Construction Under Architect's Supervision	$5,028,896,000
Buildings of All Types—Excluding Public Works and Utilities—Not Designed by Architects (Estimated from Averages of Previous Years)	1,972,000,000
TOTAL ESTIMATED CONSTRUCTION FOR 1930 (Exclusive of Public Works and Utilities)	$7,000,896,000

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month's total, $97,352,700, in amount, was 13 percent greater than November, 1929, record but was off 19 percent when compared with the corresponding month of 1928.

The major items in the December construction record were the following:—$64,237,800, or 66 percent of all construction, for residential buildings; $47,279,700, or 49 percent, for industrial plants; $16,601,800, or 17 percent, for public works and utilities, and $6,104,600, or 6 percent, for commercial buildings.

Last month's contract total brought the amount of new construction work started in the Central West during the 1929 year up to $1,681,835,800, compared with $1,934,774,900 for the year 1928, a decrease of 15 percent.

New contemplated projects reported in December reached a total of $249,768,700, representing rated increases of 48 percent over November and 16 percent over the December, 1928, total.

In the Northwest (Minnesota, North Dakota, South Dakota and Northern Michigan) the December contract record amounted to $6,866,900. A decline of 31 percent was recorded from the preceding month's total but a decided increase of 79 percent was noted over the corresponding month of 1928. According to active classes, the December construction record showed the following totals:—$4,429,900, or 65 percent of all construction, for public works and utilities; $1,223,600, or 18 percent, for industrial plants; $653,100 or 10 percent, for residential buildings; and $451,400, or 7 percent, for commercial buildings.

Contracts awarded for the entire year of 1929 amounted to $94,504,500 and when compared with the 1928 record ($89,190,700) shows an increase of 18 percent, this being the only territory to register an increase in 1929.

The December total for contemplated work was $8,119,700 against $18,137,500 for November, 1929, and $9,136,300 for December, 1928.

New building and engineering contracts let in the Southeastern States (North Carolina, South Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi, Arkansas and Louisiana) for December amounted to $20,221,600. This figure was 9 percent below the preceding month's record and 40 percent off from December, 1928, figure.

The most important items in the past month's construction record were the following: $5,514,700, or 27 percent of all construction, for residential buildings; $4,585,100, or 23 percent, for public works and utilities; $3,364,500, or 17 percent, for industrial plants, and $2,762,300, or 14 percent, for commercial buildings.

The total volume of new construction contracted for in this district for the year 1929 amounted to $537,459,400, representing decrease of only 4 percent from the 1928 year.

The volume of work reported as contemplated in December totaled $58,760,300, which was a gain of 37 percent over the amount reported in November, 1928, and a slight increase of 3 percent over the December, 1928, record.

The State of Texas had $12,071,100 in construction contracts awarded in the final month of 1929, compared with $12,938,200 for November and $16,953,400 for the December, 1928, record. Included in last month's building record were:—$3,024,200, or 25 percent of all construction, for commercial buildings; $2,951,700, or 24 percent, for public works and utilities; $2,569,500, or 21 percent, for residential buildings, and $1,324,900, or 11 percent, for religious and memorial buildings.

December brought Texas construction total for the year 1929 up to $217,800,000, compared with $231,408,800 in the year 1928, which was a decrease of only 6 percent.

In contrast to other figures the contemplated new work reported during the past month was more than double the amount reported during the preceding month, indicating a favorable prospect for increased building next year.

December contemplated work amounting to $30,834,500, compared with $13,927,100 for November and $32,636,700 for December, 1928.

As regards the prospects for 1930, authorities presented a qualifiedly hopeful view, forecasting increased total activity, particularly in the possibility of lower interest rates. According to opinion, the months of January, February and March should not show much of an improvement over the poor months of November and December, but it is expected that the easy money flow and the reaction to the Hoover stabilization campaign will foster a recovery in the Spring, which should reach substantial proportions late in the year. This is particularly true of the public utility and industrial classes of work.

Sales Increased

Total sales of paint, varnish and lacquer products during the first ten months of 1929 as reported by 438 firms to the Department of Commerce were valued somewhat higher than sales for the corresponding period of

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1928. Total sales during the 1929 period amounted to $334,796,090, compared with $314,903,594 during the opening ten months of 1928. Of these amounts, $125,967,866 represented the values of sales to dealers, jobbers, painters and consumers in 1929, compared with $119,869,669 in 1928. Industrial sales, which include shipments to manufacturers, railroads, government, marine and all similar users, were valued at $116,048,145 in the first ten months of 1929 and $105,275,476 in the like period of the preceding year.

Metallic Lead and Zinc

Barring an upheaval in values during the final quarter of the year, pig lead prices were generally higher in 1929 than in the previous year. A low opening was a carry-over from the closing few months of 1928, but improvement was rapid and constructive, bringing the market close to the high levels of the first half of 1927. Stability was a striking feature until the general recession of commodity prices following the break-up in Wall Street securities and the financial structure of the country in November. Beginning the first week in November and through to the close of the year, the market was at its lowest depth since August, 1928, and though pressed by mounting production throughout the fall, the decline in prices was mainly psychological, for in the brief space of nine trading days, October 29 to November 7, the price of pig lead was reduced 65 points.

There was but little change in the buying policies displayed by consumers in 1929. As in the preceding year, purchasing was mainly conducted on a month-to-month basis and trading in future position was confined within a relatively small group of the larger consumers and was of little value as an indicator of, or support to the basic position of the market. A comparison of pig lead prices prevailing in the local market at the start of the various quarters of 1929 and the two preceding years, together with comparative prices at the close of the respective years, follows:—

	Per pound—		
	1929.	1928.	1927.
January 1	$0.0650	$0.0650	$0.0780
April 1	.0775	.0600	.0735
July 1	.0700	.0630	.0630
October 1	.0630	.0650	.0625
December 31	.0625	.0650	.0650

World production of lead during 1929 registered an increase of 110,716 tons, amounting to 1,931,796 tons compared with 1,821,080 produced in 1928. The average daily rate of production in 1929 was 5,293 tons, compared with 4,976 in the preceding year.

Output of primary domestic desilverized lead in 1929 was about 382,000 tons; of soft lead, about 250,000 tons, and of desilverized soft lead, about 57,000 tons, making a total output from domestic ores of about 689,000 tons of refined lead, according to statistics compiled by the United States Bureau of Mines. Corresponding figures in 1928 were 351,734 tons of desilverized lead, 225,003 tons of soft lead, and 49,465 tons of desilverized soft lead, making a total of 626,202 tons. The output of lead smelted ad refined from foreign ore and bullion was about 103,000 tons, compared with 154,869 tons in 1928. The total primary lead smelted or refined in the United States in 1929 was thus about 792,000 tons, compared with a total of 781,071 tons in 1928, an increase of about 1 percent. The output of primary antimonial lead in 1929 was about 26,000 tons, as compared with 33,058 tons in 1928.

Imports of refined pig lead for eleven months amounted to 1,657 tons, of which 1,064 tons came from Mexico. The base bullion imported during the same period contained 78,674 tons of lead, almost wholly from Mexico and Peru. Exports of lead of foreign origin amounted to 49,731 tons, compared with 102,067 tons exported in the entire year 1928. Exports of lead of domestic origin amounted to 18,839 tons, as compared with 14,202 tons exported in 1928. Exclusive of stocks of lead at smelters and refineries and estimating the amount of lead exported with benefit of drawback, for which figures are not available, it is calculated that the new supply of lead made available for consumption in 1929 was about 718,000 tons, compared with 657,565 tons in 1928.

Slab zinc prices shared similar surface conditions with the metallic lead market in 1929; the character of purchasing was virtually unchanged from 1928. Until the market reached the retrogressive period that followed the Wall Street crash in November, there was a visible upward margin of prices. At the year's opening, low prices were brought forward from the closing months of 1928, but like lead, improvement was progressive and carried the market comfortably over the 7c. per pound mark at frequent periods. The last previous time that 7c. per pound was obtainable for zinc slabs was in March, 1927, and the highest point reached throughout the whole of 1928 was only 6.70c. per pound. Conversely, however, the sharp break in November furnished a new low for the year and the lowest market since October, 1928.

Purchasing was mainly conservative and a tendency to buy for requirements over a brief period was particularly evident in the final quarter of the year. Brass manufacturers were active figures in the consuming trade last year and purchasing operations were carried on rather extensively. Late in the year it was announced that the international zinc cartel, in which American producers had been participating in over the greater part of the year, had collapsed and that the agreement that expired with the close of the year would not be renewed. While it was not officially acknowledged observers blamed the tendency toward over-production as the underlying cause for the break-up of the cartel and its action had a clearly weak reflection both here and at London as the market entered 1930.

A comparison of slab zinc prices prevailing in the local market at the start of the various quarters of 1929 and the preceding two years, together with comparative prices at the close of the respective years, follows:—

	Per pound—		
	1929.	1928.	1927.
January 1	$0.0670	$0.0597½	$0.0740
April 1	.0715	.0605	.0690
July 1	.0685	.0647½	.0650
October 1	.0710	.0690	.0650
December 31	.0580	.0670	.1597½

Output of primary metallic zinc from domestic ores in 1929 reported to the Bureau of Mines was about 610,700 tons and that from foreign ores was about 13,300 tons, a total of 624,000 tons, compared with 591,525 tons from domestic ores and 11,056 tons from foreign ores, or a total of 602,581 tons in 1928. In addition to the output of primary zinc there was an output of about 52,100 tons of redistilled secondary zinc, compared with 48,666 tons in 1928, making a total supply of distilled and electrolytic zinc in 1929 of about 676,100 tons, composed of 235,700 tons of high grade and intermediate, 97,500 tons of select and brass special and 342,900 tons of prime western zinc. Of the total output of primary zinc in 1929, 157,300 tons was electrolytic zinc distributed as follows:—Montana, 138,200 tons; Idaho, 16,500 tons, and Illinois, 2,600 tons. An electrolytic zinc plant at East St. Louis, Illinois, was put into operation in September, 1929. A total of 110,000 tons of slab zinc was made in Pennsylvania, 111,000 tons in Illinois, 108,000 tons in Oklahoma and the remainder in Arkansas, Indiana, Kansas, Texas and West Virginia.

Imports of slab zinc for eleven months amounted to less than 1 ton. Exports of slab zinc made from domestic and foreign ores amounted to 18,502 tons, including 4,887 tons of rolled zinc. The stock of zinc reported at smelters and electrolytic refineries November 30 was about 72,700 tons. No slab zinc was reported in warehouse. The apparent consumption of primary zinc in 1929 was about 579,500 tons, relatively unchanged from the 578,060 tons reported as apparently consumed in 1928.

The total number of retorts at the twenty-one zinc smelters that operated during all or a part of the year was about 107,500. Of that number, about 62,200 were reported in operation at the and of November and 62,200 were expected to be in operation at the end of the year. At the end of 1928 there were 63,716 in operation at 19 plants.

Pigments

With the return of metallic lead prices close to the position occupied in 1927, prices for derivatives in the pigment division of the market improved correspondingly. For each change of 25 points in the price of pig lead, corroders adjusted their price schedules for dry pigments, in casks, ¼c. per pound in the direction taken by the basic metal. Dry red lead, litharge and orange mineral were affected in this manner and the trend of prices was mainly strong and upward through the year until the market reached November, and then pointed downward in sympathy with the descending curve of metal values. At the close of 1929, the position of these products was similar to that at the year's opening.

In addition to fluctuations in lead oxides, white lead-in-oil was advanced twice during the year and titanium pigment was reduced twice. The remainder of the market passed through the entire year without marked change.

Sales totals for 1929 have not as yet been reported by lead corroders, but representative sellers in the East declared that an aggregate of equal tonnage with the sales total of 1928 was all that could be looked for. Decreasing consumption of white lead-in-oil was again the hindering factor and was believed to have offset a prospective gain in the total sales of lead pigments, which was made probable through the agency of a normal growth in the use of dry products, litharge and red lead-in-oil. Sales of white lead-in-oil have been on the decline for the past eight years, and 1928 sales by one representative corroder were 5 percent less than the previous year and 18 percent below a yearly average. Official acknowledgment of this continued downward trend was given to cover the period of the first eight months of 1929, and from weekly reports of the sellers it was reasonably safe to calculate that the closing quarter of the year did not show a reversal of conditions. It was not known if sales of orange mineral, which in 1928 were off by approximately 40 percent from the preceding year, continued with the same tendency, but in many avenues of consumption this product has been supplanted with red lead. The extensive activity in the construction field and the vast ship-building program as well as the large increase in steamship operation, created large needs for red lead as a protective coating and helped maintain the demand for principal lead products close to the volume of 1928.

Lithopone manufacturers had a very satisfactory year. The firm structure of prices was carried over from 1928 and the regular lithopone market remained without change over the entire year. Closer integration of the manufacturing companies was one of the features of 1929 and was in a large way responsible for the absence of elements that usually disturb values. High zinc sulphide lithopone—with 50 percent zinc sulphide content—was reduced in December to the basis of 7½c. per pound to meet a previous reduction in the price of titanium pigment. Makers of commercial lithopone have repeated their contract prices for 1930 and have made preparations for additional interest in this product over the coming year.

Titanium pigment was reduced twice during the year—July 1 and December 2—reflecting the expanding use and increase to manufacturing facilities. Sales of this and related titanium products were greater during 1929 than any previous year and since its commercial introduction some years ago has made remarkable progress to a point for consideration as an outstanding isomer in the chemical process industry. The supply of titanium was augmented through the leasing of deposits in the Chesapeake Bay last summer and with leading sellers prepared to offer contracts for the first time, additional concern is anticipated by the makers for 1930. The general aspect of the barytes market went without important change in 1929. As in previous years all but a small portion of the purchasing was done on contracts covering requirements to extend over the twelve-month period. Neither the domestic sellers nor the importers have reported on their sales, but so far as the paint industry was concerned there was a satisfactory demand through the season and contract withdrawals were fully up to commitments at the close of the year. Commercial exploitation of crude deposits in Georgia was one of the features in the supply division of the market.

Conditions in zinc oxide showed but little change from the surrounding elements of 1928. Prices for both leaded zinc oxide, which has been unchanged since April, 1927, and the lead-free product, which has been unchanged since January, 1927, were well held throughout the year. With prices apparently free from active fluctuation, consumers continued their past policy of limiting their orders to their immediate needs and reverting the cost and responsibility of carrying warehouse stocks back to the selling factors. The curtailment of manufacturing operations in the rubber tire industry over the closing four months of the year had a depressing effect from the consuming angle, but made no impression upon the firm structure of prices. From preliminary observations by the sellers, requirements in the paint manufacturing industry were normally larger than the preceding year; this was particularly noted during the first half of 1929.

Dry Colors

Comparative stability of prices and further constructive advancement toward improved selling ethics in the trade were the most noteworthy characteristics in the dry color field during 1929. While the market was far from being free from competitive price cutting and concessionary tactics were less frequent, less damaging in effect and, barring a few alterations in some of the principal colors, the surface of prices in the general line was not markedly disturbed.

In addition to the general sentiment for better competitive selling the producers proferred varying attributes as the underlying cause for leveled prices last year. The maintenance of the week-to-week demand to a degree where competition was less strained than formerly was apparent and the urge to shade became more occasional than habitual. Some sellers declared that "prices were already too low and that it would not only be economically unwise but also unprofitable to cut any closer to cost." Barring "inside" influences, the "merger movement" of 1929 was perhaps the most forceful factor in price maintenance. There were three outstanding mergers during the year and several others were under contemplation at one time or another during the year.

While complete data on the volume of dry color consumption in 1929 was still lacking, it was shown in a preliminary survey of the trade that the increase over 1928 was quite substantial and in many cases phenomenal during the first half of the year, but the closing six months did not measure to very impressive dimensions and in many selling directions an even break with 1928 was all that could be hoped for.

Carbon black was a highly competitive article last year and in 1929 prices were again advantageous to the buying trade. Overproduction and sharp competitive selling, which subsequently assumed the proportions of a "price war," were among the chief features of the year. As in the case of many other colors there was a normal gain in consumption both in the foreign and domestic channels of use in the first half of the year, but in the closing six months any growth that might have occurred was neutralized by the virtual dormancy of the rubber industry—the principal avenue of consumption. Production was let run without very strict control and was far in excess of requirements.

The market opened the year with an advance of ½c. per pound over the ruling prices named at the close of 1928, and buying support was sufficiently extensive to offset the mounting production and hold prices in a firm state until August. It was at that time when demands from the rubber trade showed a serious let-down. Already under some degree of pressure, this loss of interest forced concessions from weaker hands and there was considerable cutting under the market through August, September and October. The strain of competition became openly evident in November and the constructive progress that the market had made in 1928 and through the early part of last year was removed. The figures ruling at the closing of the year were 6c. per pound, f.o.b. Texas, and 6.10c. per pound, f.o.b. Louisiana, compared with 8c. and 8.10c. per pound at the beginning of the year.

The usual psychological hesitancy to buy on a declining market was openly shown by buyers when the time came for contracting their requirements for 1930. While the low prices existed, many preferred to shop in the open market instead of contracting, and the desire for this business, as well as some of the smaller contracts still open, led to further competition and still lower prices in the opening few weeks of 1930.

The market was not without attempts at stabilization, however. The formulation of an export body to operate under the Webb-Pomerene export laws was announced in December, and it was believed that a large portion of the existing over-supply could be diverted through export channels under a unified selling interest and, if properly exploited, could accomplish the desired stability. Not all of the producers were listed in the roster of the association.

Other blacks were not particularly featured last year. There was a carry-over of the competition between domestic and foreign sellers of lampblack and prices were reduced from 9c. to the basis of 7c. per pound in the early part of the year. The use of black oxide of iron in steel and iron finishes was extended last year and prices were held without change.

Conditions in blues were markedly stronger in 1929 than in the previous year. Based chiefly on higher raw material values, non-bronze blues were fully 3c. per pound higher at the close of the year and strength was carried through the entire year, which was in direct contrast wth conditions during the first half of 1928. Advances were effected in the bronze variety in March and April, and were well held through the entire year.

Browns retained their former even tone last year. Excepting a fractional decline in the price of burnt American umber early in the year, the entire market was without change. Most of the business transacted was done on contract last year and both the importers and the domestic sellers reported a full clean-up on commitments made to extend over the twelve-month period. From the sales angle, the year was a very satisfactory one. Fall business established new records at many selling hands and while some uncertainty was present, due to possible effects of the impending tariff bill, surrounding conditions gave every evidence of continued expansion of consumption for the earth colors in the group during 1930.

From the angle of consumption, c.p. chrome green was the leader of the green colors. The speculative element, which had been an ever-present market factor until a few years ago, has apparently been removed from this commodity, and, as in 1927 and 1928, the price remained pegged at the 27c. per pound level throughout the year. Most of the purchasing was done on twelve-month contracts and a particular preference for the lighter shades was one of the notable features of the year. Commercial green, which has been without price change since July, 1927, again passed through the year without change. Other greens were more or less routine, with prices

generally healthy and no important changes occurring.

Prices for both earthen and chemical reds were remarkably stable last year. True, there was some shading on toners carried over from the closing few months of 1928, but strong consuming interest during the Spring period clarified this condition to the extent of maintaining the market at its established level. Fine lakes were free from the shaky price conditions that characterized them in 1928. While accurate consumption data was still forthcoming, English vermilion was one product which was believed to have shown a loss in consumption volume from 1928. The continued declining use of this product was one of the prime reasons for the recent action of the Mercurio-Europio in posting a prize award for the discovery of new uses for the basic raw material. Prices for ths red were not subject to as much fluctuation last year as in 1928. The market was reduced early in the year and brought back to the level of $1.90 per pound in August, compared with about nine changes of price during the preceding year. The comparative firmness of prices was due to stronger controlling conditions in the mercury market.

Stability in cochineal held its derivative, carmine No. 40, in a firm position all year. American Indian red, red oxide from copperas, tuscan and venetian were all without change and all without serious impressions against their structure. As the manufacturers of intermediates could only point to a maintenance of their 1928 price values, the position of toners, fast reds and other derivatives were not basically firmer than their position of the previous year.

Favor in yellows was better during 1929, due to the general trend of preference for lighter shades. As in 1928 and many previous years, chrome yellows led the remainder of the line in consumers' attraction. The firmer position of pig lead over the greater part of the year was the principal supporting factor in two price advances occurring in March and April, which brought the market considerably beyond its position in 1928. The high for the year was 17c. per pound and the low 16c. per pound. Competition among the sellers was still rather strenuous, but, aided by higher-priced raw material and additional inside influences, it was less damaging to prices. Ochers passed through the entire year without change in either price or position.

Colors in Oil

The sale of oil colors during 1929 was conducted in normal fashion and the market was free from modifying or depressing influences. Weather conditions during the past year were more favorable than in 1928 and in season the trade was able to point to a steadily increasing sales outlet through retail stores. Extension of the clean-up and paint-up campaign reflected in good demands over the Spring and early Fall seasons. One definite trend given to the trade last year was the increasing popularity of the lighter colors; even in the Fall, when browns and somber shades were usually preferred, the lighter colors were favored.

As in 1928, there were no important changes in the schedule of prices. Unlike mixed paints, which were advanced 25c. per gallon following the sharp rise in linseed oil prices late in the Summer, the price of oil colors remained undisturbed. The stability of raw material prices served as a barrier against any decided downward turn in the market last year.

Varnish Gums

Values for the principal spirit soluble varnish gums were subject to constant downward precipitation last year and again their position was to the buyers' advantage, even more so than in 1928. While the volume of trading in the gum field was greatly extended through the similarly increased industrial use of "four-hour" varnishes to replace pyroxilin and nitro-cellulose lacquers, the consuming trade repeated their previously adopted practice of ordering in small lots and only as needed for their immediate requirements. This practice became widespread in 1929 due to the constant declining trend of the market. The change from long-term buying to that of trading in the open market has led to more spirited competition among the various importers and a reduced market position for practically the entire market for spirit gums.

A better standard in trading conditions was noted in 1929. Principally through the action of the Varnish Gum Importers' Association, whose record of accomplishments included a unified scale in the matter of granting csah discounts, the quality of imported gums was materially improved. Sharper dividing lines in the grading and sorting of gums has resulted from the more efficient and precise manner of conducting what is known as the "arbitration board," which settles the quality differences in intertrade transactions.

The position of kauri gum last year was an odd one. By comparison with related gums the market, particularly for the brown gums, was steady and without change all year. As the result of the low prices being obtained for this gum, one large operator at Auckland intended to close the famous Aranga gum field . The settlement which has been in existence for 50 or 60 years has been recently worked at a depth of 14 feet. Gum worth thousands of pounds has been won from the field but owing to the low market it was considered more profitable to leave the gum in the ground.

Consumption here showed a good increase, amounting to 4,471,856 pounds during the first eleven months of the year, as compared with 4,445,364 pounds during the corresponding period of 1928, according to the Department of Commerce. The import values of this gum amounted to $615,066 in 1929 and $602,815 in 1928. The status of the New Zealand kauri gum industry during the past ten years is shown by the following figures of production, exports and average price per ton:—

Year.	Tons Produced.	Tons Exported.	Average price per ton. £	s.
1918	2,687	2,419	65	0
1920	5,653	6,418	85	15
1921	4,331	3,901	84	0
1922	7,003	6,391	88	0
1923	6,502	6,598	91	0
1924	5,434	5,261	84	8
1925	5,068	5,398	77	4
1926	4,250	4,877	68	4
1927	3,820	4,674	59	12
1928	4,003	4,394	54	13
*1929	805	1,106	54	8

* First quarter.

From a point of market activity, sandarac, elemi and East India copals were most interesting. Scarcity both on spot and in the primary market developed in the early spring period and high prices reigned over the balance of the year. The short supply of sandarac was so great that the importers at one time were able to command 75c. per pound for this gum, which under normal crop conditions should sell for less than half that figure. However, there was not much gum sold at 75c. per pound or at neighboring amounts. The position of the elemi market was strong and in short-supply through the greater part of the year. The inclemency of the weather at the primary markets in mid-summer added further reverses to the progress of the market and even higher prices.

Heavy production of dammar gum in Batavia created a descending scale for prices of this gum here and gave the market a rather ragged appearance throughout the year. At the opening the reigning market was placed at 25c. per pound but weakness was both rapid and forceful, and after lingering about the 23c. per pound market for a period, declined to its closing position of 19c. per pound, representing a decline of 6c. per pound in the market price for the year. Even this did not represent the true extent of the decline as some distress sales had been made at 17½c. and 18c. per pound just prior to the inventory period at the close of the year. Imports of dammar gum for the first eleven months of the year aggregated 17,311,386 pounds, compared with 14,820,323 pounds during the corresponding period of the preceding year. According to the Department of Commerce, values of these imports amounted to $2,921,806, compared with $1,871,790 during 1928.

The prices for rosin and glycerin were such as to cause no appreciable change in the price for ester gums last year but due to the strain of competition, prices were fully 2c. per pound lower than their opening level and unconfirmed reports had it that the light grades were being offered as low as 6½c. per pound in the summer. The consumption of these gums has increased sharply in the use of four hour drying varnishes but competitive stress was apparently too potent to overcome the natural tendency for buoyancy caused by the increase of use.

Driers

As raw material prices for derivatives in this division of the market did not show any great change in 1929, quotations were not subject to serious adjustment in either direction. There was a general firming up of the resinate and stearate driers in the opening months of the year and beyond the appearance of temporary weakness from time to time, the general position of the market was firmly controlled by the sellers. The resinates were visibly weak during the summer and early fall months but improved to a point where the sellers were able to obtain their full asking prices.

One particular feature to the drier trade last year was the move toward specialization of manufacture. One large Eastern manufacturer has almost entirely dropped the manufacture of the resinate group and has devoted selling effort to the stearates, which have become increasingly important components in the refining of greases and lubricating oils.

Sharp declines in the zinc market had little or no effect in its derivatives in this class and likewise, a reduction in the schedule for borax had no impression against the firm position of the borate group. The general position of this department of the trade was rather firm and fraught with promise for expansion as it entered the 1930 period.

Lacquer Materials

If the growth of the lacquer materials market had been remarkable in 1928, its expansion in 1929 was not less than phenomenal. The experimental and research plants of lacquer plants had been conducting experiments on an extensive scale and it was quite evident that the use of nitrocellulose lacquers was destined to become more general than ever.

For the purpose of creating and promoting better business relations among the manufacturers of solvents throughout the United States there was organized during the year the Solvents Institute, Inc. Included among the organizing concerns were seven of the most influential ones in the industry. Among the objects of the institute which will maintain offices in this city are the maintenance of the industry upon a high ethical basis; prevention of unsound business practices; the more complete co-operation and coordination of the industry with the army and navy of the United States; encouragement of the reduction of the cost of production through elimination of waste and recovery of by-products; establishment of arbitration boards to settle disputes between members and others, and the encouragement of co-operative advertising.

The automotive field again absorbed the great bulk of the production of the raw material as well as the finished lacquer, since color had assumed much more importance in the negotiations surrounding automobile sales. The appeal to the feminine taste had, in fact, become so pronounced that some of the automobile manufacturers were offering their products finished in colors dictated by the trend in women's ensembles.

It became quite evident early in the year that new records in automobile production would be established. The sales of automobiles during the first quarter of the year, for example, were restricted because of the limited stocks available. As a result, production was stepped up to hitherto unheard of totals and in the first quarter total production of cars and trucks was close to 1,500,000, an increase of about 500,000 over the corresponding period of the year before. During the same period Canada was producing a record breaking volume of cars and trucks. While there was some seasonal tapering off of the output during the late days of the Spring and the early Summer months, the fact remained that in each succeeding month an increase over the corresponding preceding period was being shown. The opening up of foreign markets was one of the factors contributing towards the big increase in the output. The export demand was absorbing at least 10 percent of the total production. The estimate which was made in the latter part of August that total automotive production for the year would reach over 5,000,000 was more than borne out in the final figures which indicated an output of close to 5,000,000 units.

In spite of the record breaking sales volume occasioned by the heavy demands from the automotive industry, as well as from the numerous other trades and industries which were utilizing lacquers for beautifying and increasing sales appeal of their products, competition was quite rife among producers, and the general trend of most of the raw materials which go to make up this line was towards lower levels during the greater part of the year notwithstanding that the general volume of sales was substantially ahead of the corresponding period of the year before. Weak conditions developed in butyl acetate quite early in the year following charges that foreign producers had been dumping the product here at ruinously low prices. From a basis of $1.40 to $1.45 per gallon, car lots, tanks, it declined until it was quoted at $1.35 per gallon, tanks, and $1.40 to $1.43 per gallon, car lots, drums. Competition between the foreign and domestic was somewhat less pronounced during March and April, although importations of the foreign product were being received in record volume. Early in May a price of $1.35 per gallon had been established for the solvent, although it was the understanding that sales had been made at less. Unsettlement continued to characterize butyl acetate during the early summer months and in June a cut of 3c. per gallon was made again, this establishing the price at $1.32 per gallon, tanks, $1.34 per gallon, car lots, drums, and $1.37 per gallon, less than car lots, drums. It was believed that some rather substantial accumulations of the goods had been responsible for the weaker market situation which had developed. Towards the end of July the lacquer materials manufacturers had provided for the bulk of their requirements in this raw material and while a certain amount of filling in business was still in evidence it was necessary to further readjust the scheduled prices for the purpose of quickening the market movement. Thus the producers changed the method of quoting from a per gallon to a per pound basis in July when they quoted tanks at 18.1c. per pound, car lots, drums 18.4c., and less than car lots, drums, 19.5c. per pound. The announcement was made during the year that a new plant for the production of butyl acetate had been completed at Peoria, Illinois. Imports of butyl acetate in the first six months of this year reached a total of 4,398,181 pounds in contrast, with 1,673,521 pounds in the corresponding period of the year before. This was more than double the quantity and the value brought in in the same time in the preceding year. In this connection it was of interest to note that total imports of all acetates, including amyl, butyl and ethyl in the first nine months of 1929 amounted to 1,592,227 pounds, as against 104,959 pounds in the corresponding period of the preceding year.

Despite the persistent shortage which was current for the greater part of last year in calcium acetate and acetic acid producers of ethyl acetate continued in a position to arrange deliveries of this product to manufacturing consumers at progressively lower prices. In April they placed a reduction of 5c. per pound into effect, establishing the market at 95c. per gallon in tanks at the works, while the anhydrous grade was quoted at $1.15 per gallon in tanks, $1.17 car lots, drums, and $1.20 per gallon, less than car lots, drums. It was planned to have this schedule operative to June 30, but calculations were evidently upset by excessive inventories and another 5c. cut was named early in June which put the market down to 90c. per gallon in tanks, with proportional premiums quoted for smaller quantities. A period of unsettlement was evident during the month of July in spite of increasing difficulties which were noted in connection with the acquisition of raw material supplies. Yet in spite of this the producers found themselves carrying some fairly large inventories at the end of the half year and they were again forced to come out with price revisions. They changed their methods of quoting ethyl acetate and named 12.2c. per pound in tanks, 12.5c. car lots, drums, and 12.9c. less than car lots, drums. This schedule was maintained until quite late in November when another average reduction in the amount of 5c. per pound was placed into effect, establishing the market at 11.5c. per pound in tanks, 11.8c. car lots, drums, and 12.9c. to 19.5c. per pound less than car lots, drums, depending on quantities. The anhydrous grade was priced at 13.3c. in tanks, 13.6c. car lots, drums, and 14c. to 14.7c. per pound, less than car lots, drums. As the year ended, there was yet one more downward revision in the price and this placed the regular grade at 10.6c. per pound in tanks, the year's low point. An equalization of the price was named shortly thereafter so that the year ended with the regular quoted at 10.8c. per pound in tanks, 11.1c. car lots, drums, and 11.5c. to 15.1c. per pound less than car lots, drums.

A sensational upward movement in corn in January, 1929, served to call producers' attention to butyl alcohol. It was recalled that with the advent of the prohibition law farmers had lost a market for some 9,000,000 bushels of corn which was formerly used for making alcohol for beverage purposes. They recouped this, however, in the butyl alcohol industry which was using just about that amount of corn per annum. The corn market had eased somewhat by May when the producers announced the effectiveness of a concession of ½c. per pound in prices for butyl alcohol to 16¾c. to 17¾c. per pound, tanks, works, and 17¼c. to 18¼c. car lots, drums, 17¾c. to 18¾c. less than car lots, drums; 19¾c. to 20¼c. less than 100 gallons in drums, and 21¼c. less than 100 gallons in cans. All subsequent fluctuations in the market for grain were without influence on the position of butyl alcohol. The retention by producers of the schedules which had been named in June during the succeeding months of the year was in the face of decidedly strong conditions in the grain markets provoked by the unusual aridity prevailing. A 5c. concession was named in butyl propionate, establishing the price at 23c. to 25c. per pound, tanks, works, during the spring. Throughout the year butyl aldehyde, butyl stearate, dibutyl phthalate and others based on butyl alcohol met a good demand and were well sustained as regards price.

Derivatives of the glycol group con-

tinued to enjoy a large and uninterrupted demand throughout the year. High prices had formerly operated to curtail a more extensive use of the product, but last year cuts of 2c. to 3c. per pound were made early in the year, establishing ethyleneglycol monobutyl ether at 23c. per pound in tank cars, 24c. car lots, drums, 25c. less than car lots, drums, and 27c. for less than 50 gallons, drums. The price for ethyleneglycol monoethyl ether was likewise reduced and established on the basis of 16c. per pound in tank cars; 17c. car lots, drums; 18c. less than car lots, drums, and 20c. less than 50 gallons, drums, while ethyleneglycol monoethyl-ether acetate was lowered to a basis of 19c. per pound tank cars; 20c. car lots, drums; 21c. less than car lots, drums, and 23c. per pound in less than 50 gallon lots. Quotations for monomethyl ether acetate were likewise reduced and established at 19c. per pound, in tank cars; 20c., car lots, drums; 21c. less than car lots, drums, and 23c. less than 50 gallons, drums. The glycol preparations had largely replaced acetin as a lacquer solvent. In previous years the output of the latter had been as much as 100,000 pounds, but it had declined to but a fraction of this in 1929.

Shortages of toluene as well as acetic acid played important roles in the market throughout 1929. The former was being quoted on a 40c. per gallon basis during the year, but owing to scarcity commanded premiums at times.

The producers of tricresyl phosphate gave consumers the benefits of a rather sharp decline in selling prices amounting to roughly 2c. to 5c. per pound. Sales in 1928, as contrasted with those of the year before, had shown an increase equal to practically 50 percent. The manufacturers of lacquer materials were the principal buyers last year, but a good outlet had also been opened from other miscellaneous sources. After averaging the selling prices for the two raw materials which enter into this product for 1928 and for 1929, the producers found the price would work out to 33c. to 40c. per pound for 1929, compared with 35c. to 45c. per pound in 1928. Another interesting price revision early in the year was in triphenyl phosphate, which was advanced to 65c. to 75c. per pound in drums, comparing with a previous price basis of 55c. per pound.

Producers of ethyl lactate, as well as ethyl oxybutyrate, were successful in disposing of just as much of these products as they had done at any preceding period. Considerable interest attached to the announcement from manufacturers of a reduction of approximately 3c. per pound in quotations for ethyl lactate, which established the new schedule at 24½c. per pound, tanks, works; 25c. car lots, drums, works; 26c. less than car lots, drums, works, and 29c. per pound, works, in single drum lots. At the same time the quotation for ethyl oxybutyrate was reduced 2½c. and established at 30½c. per pound, drums, works.

Stocks of methyl acetate which had been on the market at 85c. to 95c. per pound were reported to have been virtually cleared towards the fall. A firmer tone also developed at this time in triphenyl phosphate, which was priced at 60c. to 70c. per pound in drums. Late in the year stocks of foreign methyl acetate were being offered from one direction at as low as 16½c. per pound for a 99 percent grade. The general market reverted to a steady position at the end of the year. The cold weather put a punch into the demand for anti-freeze compounds and made for more favorable marketing conditions. As the year ended diacetone alcohol was cut in the amount of about 20c. per gallon and established on a pound basis, quotations being 15¾c. per pound, contracts, tanks; 16¾c., tanks, spot; 16¼c., carloads, contracts, drums; 17¼c. less car lots, drums, and spot, 18¾c. per pound. In less than 50-gallon lots the quotation stood at 19½c. per pound, f.o.b. the works.

Other Paint Materials

The purchasing of miscellaneous paint materials was conducted mainly on a contract basis last year, and there was very little change to the general character of the market. While there was a normal growth of consumption in varnish makers' naphtha, casein and other principal products, realization of the increasing importance of high quality standards as an essential factor in the sale of mixed paints, caused continued decline in the sale of some of the less expensive fillers. Prices for products included in this division of the market were generally on a comparative parity with those of 1928, and the only visible differenccs noted were in v. m. and p. naphtha and casein. Both were slightly lower.

Varnish makers' naphtha was subject to some stress from the weakness in the refined gasoline market and was kept at a low figure over the Summer but was not markedly below its normal position, as the production of this product, particularly in the East, is rather closely controlled and the nature of competition was not of the variety that keeps the selling prices close to cost.

Normal differentials between the prices for foreign and domestic casein were maintained oevr 1929. The Argentine market was rather well supported at the opening of the year and prices were pegged above the 16c. per pound level until May. Through the remainder of the Spring and over the entire Summer period the market was subject to uncertainty. The provision in the impending tariff bill disrupted the entire physical status of the market and buying was done along ragged and very disconnected lines. The introduction of the tariff bill and its up and down progress caused considerable dumping of foreign casein offerings in mid-summer and a comparatively low market resulted. The one supporting feature to casein prices over the greater part of last year was the curtailed production due to the world-wide drought in the Spring and Summer. It was the effects of the drought that re-injected strength into the market toward the closing of the year; the ruling price for Argentine at the closing few days of the year was 14½c. to 15c. per pound, but was due to tapering demands of the inventory season and not to basic supply conditions.

Strangely, the drought did not seriously affect the output here, as casein production in the United States, according to preliminary figures, amounted to 11,875,000 pounds, the output of 180 factories during the second quarter of 1929. This brought the total domestic production for the first six months of 1929 up to approximately 16,750,000 pounds. In 1928 domestic production in the second quarter amounted to 7,991,000 pounds, and the six months' total was 12,681,000 pounds. The factories reporting in 1928 numbered 140.

The increasing demand for wood flour in the manufacture of various articles, including phenol-resin products, linoleum and dynamite cartridges and paint filling, is reported to have resulted in an increase in consumption from 7,000 tons in 1924 to 40,000 in 1928. During the latter year 14,490,401 pounds, valued at $94,723, were imported, and in 1929 the sellers went rather extensively into consumer education of this product. Graphic displays at various industrial exhibitions throughout the country resulted in a wider consuming market over the past year.

The remainder of the group was not subject to important fluctuation of prices. Imported terra alba was lower on 1930 contracts to bring the foreign market to a closer parity with the domestic prices. China clay and other mineral whites were not changed in either price or position in 1929.

Window Glass

The window glass industry was one of the few branches of business that was less active in 1929 than the year previous. The decrease in the volume of building construction was directly reflected in the consumption of glass, and at no time during the year could it be truthfully said that demands equaled the volume and frequency of the corresponding period of 1928. Even in the usually busy months of September, October, November and December conditions were such as to force the producers to curb output measurably. At the close of the year there were ten producers thought to be manufacturing the entire domestic output, which was estimated in one reasonably responsible quarter at 500,000 to 600,000 boxes, each containing 50 square feet, monthly. Total domestic production for the year was estimated at about 7,500,000 boxes.

Despite the fact that the year was one of the most unsatisfactory on record, there were two prominent events which should place the industry on a more stabilized basis. One was a radical change in the method of manufacture and the other was an advance in the tariff on imported glass. The year 1929 witnessed the virtual passing of cylinder glass manufacture. At the close there was believed to be only one tank operating with cylinder machines, all other plants having been converted to the recently perfected flat drawing process. The import duty on foreign glass was advanced May 14, to be effective thirty days after the signing of the bill. Exercising the flexible tariff privilege under the tariff act of 1922, President Hoover raised the duty to 45 cents per box.

Even the exploitation of flat drawn sheet glass, through the medium of a national advertising campaign conducted by one of the leading makers, failed to prove anything in the way of a spur to trade last year. The window glass industry was also affected by a condition that was felt in many related lines of business last year, in the tendency on the part of consumers and distributors to relegate the burden of carrying storage stocks back to the manufacturers and to order in small quantities for their immediate needs or for a small warehouse supply only.

The Belgian trade also felt the reduced activity in the market here last year. The increase in the tariff duty was mainly responsible and, in the absence of official figures, the total imports of glass and glass products was used as a basis for computation to reveal that imports were reduced by approximately 10 percent.

The schedule of prices for window glass, which has been without change for many years, was also retained through 1929. Trade discounts were also unchanged over the year, but wide concessions were available on frequent occasions.

Paint and Varnish Materials: Record of Prices

Metals

Pig Lead

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.0650	$0.0650	$0.0665	$0.0650
February	.0650	.0625	.0710	.0650
March	.0615	.0600	.0775	.0695
April	.0610	.0610	.0775	.0700
May	.0620	.0610	.0700	.0700
June	.0630	.0620	.0700	.0700
July	.0630	.0620	.0700	.0675
August	.0630	.0620	.0675	.0675
September	.0650	.0640	.0690	.0675
October	.0650	.0650	.0690	.0690
November	.0650	.0635	.0690	.0625
December	.0650	.0635	.0625	.0625
Year	.0650	.0600	.0775	.0625

Zinc

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.0602½	$0.0595	$0.0670	$0.06675
February	.0602½	.0575	.0670	.06675
March	.0605	.0580	.0695	.0670
April	.0615	.0605	.0715	.0695
May	.0647½	.0617½	.0685	.0685
June	.0650	.0645	.0685	.0685
July	.0655	.0647½	.0685	.0685
August	.0660	.0655	.0685	.0685
September	.0660	.0660	.0710	.0685
October	.0660	.0660	.0710	.0705
November	.0670	.0660	.0705	.0660
December	.0670	.0670	.0635	.0585
Year	.0670	.0575	.0715	.0585

Pigments

Barytes

October 18, 1871, the price was 1⅞c. to 2½c. per pound; 1881, $21 to $25 per ton; 1891, $18 to $20; 1901, $17 to $20; 1911, $18.50 to $20.50; 1913, $19 to $20; 1920, August, $40.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$23.00	$21.00	$21.00	$23.00
February	23.00	23.00	23.00	23.00
March	23.00	23.00	23.00	23.00
April	23.00	23.00	23.00	23.00
May	23.00	23.00	23.00	23.00
June	23.00	23.00	23.00	23.00
July	23.00	23.00	23.00	23.00
August	23.00	23.00	23.00	23.00
September	23.00	23.00	23.00	23.00
October	23.00	23.00	23.00	23.00
November	23.00	23.00	23.00	23.00
December	23.00	23.00	23.00	23.00
Year	23.00	23.00	23.00	23.00

Blanc Fixe, Dry

July 21, 1880, the price was 3½c.; October 18, 1881, 3½c.; 1891, 2⅝c. to 3c.; 1901, 2½c. to 2¾c.; 1911, 2⅞c. to 4c.; 1913, 2⅞c. to 4c.; 1920, August, 6½c.

(Barrels, car lots, f.o.b. works)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.04¼	$0.04¼	$0.03¾	$0.03¾
February	.04¼	.04¼	.03¾	.03¾
March	.04¼	.04¼	.03¾	.03¾
April	.04¼	.04¼	.03¾	.03¾
May	.04¼	.04¼	.03¾	.03¾
June	.04¼	.03½	.03¾	.03¾
July	.03½	.03½	.03¾	.03¾
August	.03½	.03½	.03¾	.03¾
September	.03½	.03½	.03¾	.03¾
October	.03¾	.03½	.03¾	.03¾
November	.03¾	.03¾	.03¾	.03¾
December	.03¾	.03¾	.03¾	.03¾
Year	.04¼	.03½	.03¾	.03¾

White Lead, Basic Carbonate

October 18, 1871, the price was 10c. to 10¼c.; 1881, 6¾c. to 7c.; 1891, 6⅝c. to 7⅛c.; 1901, 4¾c. to 5c.; 1911, 5½c. to 6c.; 1913, 5¾c.; 1917, July, 11½c.

(Dry, in casks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.0850	$0.0850	$0.0850	$0.0825
February	.0850	.0850	.0850	.0850
March	.0850	.0850	.0900	.0875
April	.0850	.0850	.0900	.0900
May	.0850	.0850	.0900	.0900
June	.0850	.0850	.0900	.0900
July	.0850	.0850	.0900	.0900
August	.0850	.0850	.0900	.0900
September	.0850	.0850	.0900	.0900
October	.0850	.0850	.0900	.0900
November	.0850	.0825	.0900	.0900
December	.0825	.0825	.0900	.0900
Year	.0850	.0825	.0900	.0825

White Lead, Basic Carbonate, in Oil

October 18, 1871, the price was 11½c.; 1881, 7¼c. to 7½c.; 1891, 6¾c. to 7½c.; 1901, 5¾c. to 6½c.; 1911, 7¼c. to 7½c.; 1913, 7¼c.; 1917, July, 11½c.

(Carload lots)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.1073	$0.1073	$0.1073	$0.1073
February	.1073	.1073	.1073	.1073
March	.1073	.1073	.1118	.1093
April	.1073	.1073	.1118	.1118
May	.1073	.1073	.1118	.1118
June	.1073	.1073	.1118	.1118
July	.1073	.1073	.1118	.1114
August	.1073	.1073	.1114	.1114
September	.1073	.1073	.1114	.1114
October	.1073	.1073	.1114	.1114
November	.1073	.1073	.1154	.1154
December	.1073	.1073	.1154	.1154
Year	.1073	.1073	.1154	.1073

White Lead, Basic Sulphate

December 7, 1909, the price was 5⅝c. to 6c.; October 19, 1911, 5⅝c. to 5½c.; 1913, 5½c.; 1917, August, 11c.

(Dry, in casks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.0775	$0.0775	$0.0800	$0.0775
February	.0775	.0775	.0800	.0800
March	.0775	.0775	.0850	.0825
April	.0775	.0775	.0850	.0850
May	.0775	.0775	.0850	.0850
June	.0775	.0775	.0850	.0850
July	.0775	.0775	.0850	.0850
August	.0775	.0775	.0850	.0850
September	.0775	.0775	.0850	.0850
October	.0775	.0775	.0850	.0850
November	.0775	.0775	.0850	.0850
December	.0775	.0775	.0850	.0850
Year	.0775	.0775	.0850	.0775

Red Lead

October 18, 1871, the price was 8¾c. to 10c.; 1881, 6½c. to 6¾c.; 1891, 6¾c. to 7½c.; 1901, 5½c. to 6c.; 1911, 6½c. to 7c.; 1913, 7c. to 7½c.; 1917, July, 13c.

(Dry, in casks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.1000	$0.1000	$0.1000	$0.1000
February	.1000	.0975	.1025	.1000
March	.0950	.0950	.1125	.1050
April	.0950	.0950	.1125	.1050
May	.0950	.0950	.1050	.1050
June	.0975	.0975	.1050	.1050
July	.0975	.0975	.1050	.1025
August	.0975	.0975	.1025	.1025
September	.1000	.0975	.1025	.1025
October	.1000	.1000	.1025	.1025
November	.1000	.1000	.1050	.0975
December	.1000	.1000	.0975	.0975
Year	.1000	.0950	.1125	.0975

Litharge, American

October 18, 1871, the price was 9c. to 9½c.; 1881, 6½c. to 6¾c.; 1891, 6¾c. to 7½c.; 1901, 4¾c. to 5½c.; 1911, 5½c. to 6c.; 1913, 6¾c. to 7c.; 1917, July, 12½c.

(Commercial powdered, casks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.0900	$0.0900	$0.0900	$0.0900
February	.0900	.0875	.0925	.0900
March	.0850	.0850	.1025	.0950
April	.0850	.0850	.1025	.0950
May	.0850	.0850	.0950	.0950
June	.0875	.0875	.0950	.0950
July	.0875	.0875	.0950	.0925
August	.0875	.0875	.0925	.0925
September	.0900	.0875	.0925	.0925
October	.0900	.0900	.0925	.0925
November	.0900	.0900	.0900	.0875
December	.0900	.0900	.0875	.0875
Year	.0900	.0850	.1025	.0875

Lithopone, American

May 13, 1901, the price was 5c. to 5½c.; October 18, 1901, 5c. to 5½c.; 1911, 3¾c. to 4c.; 1913, 3¾c. to 4½c.; 1920, July, 8¼c.

(Bags, car lots)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05¼	$0.05¼	$0.05¼	$0.05¼
February	.05¼	.05¼	.05¼	.05¼
March	.05¼	.05¼	.05¼	.05¼
April	.05¼	.05¼	.05¼	.05¼
May	.05¼	.05¼	.05¼	.05¼
June	.05¼	.05¼	.05¼	.05¼
July	.05¼	.05¼	.05¼	.05¼
August	.05¼	.05¼	.05¼	.05¼
September	.05¼	.05¼	.05¼	.05¼
October	.05¼	.05¼	.05¼	.05¼
November	.05¼	.05¼	.05¼	.05¼
December	.05¼	.05¼	.05¼	.05¼
Year	.05¼	.05¼	.05¼	.05¼

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Orange Mineral, American

October 18, 1871, the price was 11½c. to 12c.; 1881, 8c. to 12½c.; 1891, 8½c. to 8¾c.; 1901, 8c. to 8¼c.; 1911, 8½c. to 10c.; 1913, 8½c. to 10c.; 1917, July, 15c.

(Casks)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1200	$0.1200	$0.1200	$0.1200
February	.1200	.1175	.1225	.1200
March	.1150	.1150	.1325	.1225
April	.1150	.1150	.1325	.1250
May	.1150	.1150	.1250	.1250
June	.1175	.1175	.1250	.1250
July	.1175	.1175	.1250	.1225
August	.1175	.1175	.1225	.1225
September	.1200	.1175	.1225	.1225
October	.1200	.1200	.1225	.1225
November	.1200	.1200	.1200	.1175
December	.1200	.1200	.1175	.1175
Year	.1200	.1150	.1325	.1175

Zinc Oxide, French Process, Red Seal

October 18, 1871, the price was 7⅝c.; 1881, 4½c. to 5c.; 1891, 8c.; 1901, 8¼c. to 8⅜c.; 1911, 8¼c. to 8½c.; 1913, 7c. to 7¼c.; 1917, April, 17½c.

(Bags, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09⅝	$0.09⅝	$0.09⅝	$0.09⅝
February	.09⅝	.09⅝	.09⅝	.09⅝
March	.09⅝	.09⅝	.09⅝	.09⅝
April	.09⅝	.09⅝	.09⅝	.09⅝
May	.09⅝	.09⅝	.09⅝	.09⅝
June	.09⅝	.09⅝	.09⅝	.09⅝
July	.09⅝	.09⅝	.09⅝	.09⅝
August	.09⅝	.09⅝	.09⅝	.09⅝
September	.09⅝	.09⅝	.09⅝	.09⅝
October	.09⅝	.09⅝	.09⅝	.09⅝
November	.09⅝	.09⅝	.09⅝	.09⅝
December	.09⅝	.09⅝	.09⅝	.09⅝
Year	.09⅝	.09⅝	.09⅝	.09⅝

Zinc Oxide, French Process, White Seal

(Barrels, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.11621/2	$0.11621/2	$0.11621/2	$0.11621/2
February	.11621/2	.11621/2	.11621/2	.11621/2
March	.11621/2	.11621/2	.11621/2	.11621/2
April	.11621/2	.11621/2	.11621/2	.11621/2
May	.11621/2	.11621/2	.11621/2	.11621/2
June	.11621/2	.11621/2	.11621/2	.11621/2
July	.11621/2	.11621/2	.11621/2	.11621/2
August	.11621/2	.11621/2	.11621/2	.11621/2
September	.11621/2	.11621/2	.11621/2	.11621/2
October	.11621/2	.11621/2	.11621/2	.11621/2
November	.11621/2	.11621/2	.11621/2	.11621/2
December	.11621/2	.11621/2	.11621/2	.11621/2
Year	.11621/2	.11621/2	.11621/2	.11621/2

Zinc Oxide, French Process, Green Seal

(Bags, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1037½	$0.1037½	$0.1037½	$0.1037½
February	.1037½	.1037½	.1037½	.1037½
March	.1037½	.1037½	.1037½	.1037½
April	.1037½	.1037½	.1037½	.1037½
May	.1037½	.1037½	.1037½	.1037½
June	.1037½	.1037½	.1037½	.1037½
July	.1037½	.1037½	.1037½	.1037½
August	.1037½	.1037½	.1037½	.1037½
September	.1037½	.1037½	.1037½	.1037½
October	.1037½	.1037½	.1037½	.1037½
November	.1037½	.1037½	.1037½	.1037½
December	.1037½	.1037½	.1037½	.1037½
Year	.1037½	.1037½	.1037½	.1037½

Zinc Oxide, American Process, Lead-free

(Bags, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.0650	$0.0650	$0.0650	$0.0650
February	.0650	.0650	.0650	.0650
March	.0650	.0650	.0650	.0650
April	.0650	.0650	.0650	.0650
May	.0650	.0650	.0650	.0650
June	.0650	.0650	.0650	.0650
July	.0650	.0650	.0650	.0650
August	.0650	.0650	.0650	.0650
September	.0650	.0650	.0650	.0650
October	.0650	.0650	.0650	.0650
November	.0650	.0650	.0650	.0650
December	.0650	.0650	.0650	.0650
Year	.0650	.0650	.0650	.0650

Zinc Oxide, American Process, 10-25 p.c. Leaded

(Barrels, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06871/2	$0.06871/2	$0.06871/2	$0.06871/2
February	.06871/2	.06871/2	.06871/2	.06871/2
March	.06871/2	.06871/2	.06871/2	.06871/2
April	.06871/2	.06871/2	.06871/2	.06871/2
May	.06871/2	.06871/2	.06871/2	.06871/2
June	.06871/2	.06871/2	.06871/2	.06871/2
July	.06871/2	.06871/2	.06871/2	.06871/2
August	.06871/2	.06871/2	.06871/2	.06871/2
September	.06871/2	.06871/2	.06871/2	.06871/2
October	.06871/2	.06871/2	.06871/2	.06871/2
November	.06871/2	.06871/2	.06871/2	.06871/2
December	.06871/2	.06871/2	.06871/2	.06871/2
Year	.06871/2	.06871/2	.06871/2	.06871/2

Dry Colors

Carbon Gas Black

August 22, 1892, the price was 4c. to 4½c.; October 18, 1901, 8c. to 20c.; 1911, 6¾c. to 8c.; 1913, 4c. to 8c.; 1918, May, 40c.

(F.o b. works, bags)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06½	$0.06½	$0.08	$0.08
February	.06½	.06½	.08	.08
March	.06½	.06½	.08	.08
April	.06½	.06½	.08	.08
May	.06½	.06½	.08	.08
June	.06½	.06½	.08	.08
July	.06½	.06½	.08	.08
August	.07½	.07½	.08	.08
September	.07½	.07½	.08	.08
October	.07½	.07½	.08	.08
November	.07½	.07½	.08	.06¾
December	.07½	.07½	.06¾	.06
Year	.07½	.06½	.08	.06

Lampblack

October 18, 1871, the price was 6½c. to 10c.; 1881, 5c. to 8c.; 1891, 5c. to 10c.; 1901, 4½c. to 6c.; 1911, 3c. to 15c.; 1913, 3c. to 7c.; 1920, December, 48c.

(Commercial, barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09	$0.09	$0.09	$0.09
February	.09	.09	.09	.09
March	.09	.09	.09	.09
April	.09	.09	.09	.09
May	.09	.09	.09	.07
June	.09	.09	.07	.07
July	.09	.09	.07	.07
August	.09	.09	.07	.07
September	.09	.09	.07	.07
October	.09	.09	.07	.07
November	.09	.09	.07	.07
December	.09	.09	.07	.07
Year	.09	.09	.09	.07

Iron Oxide, Black

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04½	$0.04½	$0.04½	$0.04½
February	.04½	.04½	.04½	.04½
March	.04½	.04½	.04½	.04½
April	.04½	.04½	.04½	.04½
May	.04½	.04½	.04½	.04½
June	.04½	.04½	.04½	.04½
July	.04½	.04½	.04½	.04½
August	.04½	.04½	.04½	.04½
September	.04½	.04½	.04½	.04½
October	.04½	.04½	.04½	.04½
November	.04½	.04½	.04½	.04½
December	.04½	.04½	.04½	.04½
Year	.04½	.04½	.04½	.04½

Iron Blues

Bronze, Milori, Chinese and Prussian

October 18, 1871, the price was (Prussian blue), 35c. to 70c.; 1881, 30c. to 60c.; 1891, 25c. to 40c.; 1901, 28c. to 34c.; 1911, 28c. to 30c.; 1913, 30c. to 32c.; 1917, July, $1.50.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.31	$0.31	$0.32	$0.32
February	.31	.31	.32	.32
March	.31	.31	.34	.32
April	.31	.31	.35	.34
May	.31	.31	.35	.35
June	.31	.31	.35	.35
July	.32	.31	.35	.35
August	.32	.31	.35	.35
September	.32	.32	.35	.35
October	.32	.32	.35	.35
November	.32	.32	.35	.35
December	.32	.32	.35	.35
Year	.32	.31	.35	.32

Browns

Sienna, Italian, Burnt

October 18, 1871, the price was 12c. to 14c.; 1881, 5½c.; 1891, 4c. to 5c.; 1901, 3½c. to 7½c.; 1911, 3c. to 9c.; 1913, 4c. to 7c.; 1920, January, 16c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05	$0.05	$0.05½	$0.05½
February	.05½	.05	.05½	.05½
March	.05½	.05½	.05½	.05½
April	.05½	.05½	.05½	.05½
May	.05½	.05½	.05½	.05½
June	.05½	.05½	.05½	.05½
July	.05½	.05½	.05½	.05½
August	.05½	.05½	.05½	.05½
September	.05½	.05½	.05½	.05½
October	.05½	.05½	.05½	.05½
November	.05½	.05½	.05½	.05½
December	.05½	.05½	.05½	.05½
Year	.05½	.05	.05½	.05½

Sienna, American, Burnt and Powdered

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.03	$0.03	$0.03	$0.03
February	.03	.03	.03	.03
March	.03	.03	.03	.03
April	.03	.03	.03	.03
May	.03	.03	.03	.03
June	.03	.03	.03	.03
July	.03	.03	.03	.03
August	.03	.03	.03	.03
September	.03	.03	.03	.03
October	.03	.03	.03	.03
November	.03	.03	.03	.03
December	.03	.03	.03	.03
Year	.03	.03	.03	.03

Umber, American, Burnt and Powdered

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.03	$0.03	$0.03	$0.027⅛
February	.03	.027⅛	.027⅛	.027⅛
March	.027⅛	.027⅛	.027⅛	.027⅛
April	.027⅛	.027⅛	.027⅛	.027⅛
May	.027⅛	.027⅛	.027⅛	.027⅛
June	.027⅛	.027⅛	.027⅛	.027⅛
July	.027⅛	.027⅛	.027⅛	.027⅛
August	.027⅛	.027⅛	.027⅛	.027⅛
September	.027⅛	.027⅛	.027⅛	.027⅛
October	.027⅛	.027⅛	.027⅛	.027⅛
November	.027⅛	.027⅛	.027⅛	.027⅛
December	.027⅛	.027⅛	.027⅛	.027⅛
Year	.03	.027⅛	.03	.027⅛

Umber, Turkey, Burnt and Powdered

May 20, 1872, the price was 4½c. to 5c.; August 31, 1881, 3¼c. to 4c.; October 18, 1891, 3¼c. to 4c.; 1901, 2½c. to 3½c.; 1911, 2¾c. to 3½c.; 1913, 3c. to 3½c.; 1917, October, 7½c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04	$0.04	$0.04	$0.04
February	.04	.04	.04	.04
March	.04	.04	.04	.04
April	.04	.04	.04	.04
May	.04	.04	.04	.04
June	.04	.04	.04	.04
July	.04	.04	.04	.04
August	.04	.04	.04	.04
September	.04	.04	.04	.04
October	.04	.04	.04	.04
November	.04	.04	.04	.04
December	.04	.04	.04	.04
Year	.04	.04	.04	.04

Vandyke Brown, Imported

	1928. H.	1928. L.	1929 H.	1929 L.
January	$0.04	$0.04	$0.04¼	$0.04¼
February	.04¼	.04	.04¼	.04¼
March	.04¼	.04¼	.04¼	.04¼
April	.04¼	.04¼	.04¼	.04¼
May	.04¼	.04¼	.04¼	.04¼
June	.04¼	.04¼	.04¼	.04¼
July	.04¼	.04¼	.04¼	.04¼
August	.04¼	.04¼	.04¼	.04¼
September	.04¼	.04¼	.04¼	.04¼
October	.04¼	.04¼	.04¼	.04¼
November	.04¼	.04¼	.04¼	.04¼
December	.04¼	.04¼	.04¼	.04¼
Year	.04¼	.04	.04¼	.04¼

Greens

Chrome Green, Light, C.P.

October 18, 1871, the price was 13c. to 21c.; 1881, 5c. to 14c.; 1891, 8c. to 26c.; 1901, 16c. to 20c.; 1911, 17c. to 25c.; 1913, 7c. to 25c.; 1918, August, 70c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.27	$0.27	$0.27	$0.27
February	.27	.27	.27	.27
March	.27	.27	.27	.27
April	.27	.27	.27	.27
May	.27	.27	.27	.27
June	.27	.27	.27	.27
July	.27	.27	.27	.27
August	.27	.27	.27	.27
September	.27	.27	.27	.27
October	.27	.27	.27	.27
November	.27	.27	.27	.27
December	.27	.27	.27	.27
Year	.27	.27	.27	.27

Commercial Green

October 24, 1877, the price was 10c. to 20c.; October 18, 1881, 5c. to 8c.; 1891, 8c.; 1901, 5c. to 6¼c.; 1911, 3½c. to 5c.; 1913, 3½c. to 5c.; 1919, February, 15c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06¼	$0.06¼	$0.06¼	$0.06¼
February	.06¼	.06¼	.06¼	.06¼
March	.06¼	.06¼	.06¼	.06¼
April	.06¼	.06¼	.06¼	.06¼
May	.06¼	.06¼	.06¼	.06¼
June	.06¼	.06¼	.06¼	.06¼
July	.06¼	.06¼	.06¼	.06¼
August	.06¼	.06¼	.06¼	.06¼
September	.06¼	.06¼	.06¼	.06¼
October	.06¼	.06¼	.06¼	.06¼
November	.06¼	.06¼	.06¼	.06¼
December	.06¼	.06¼	.06¼	.06¼
Year	.06¼	.06¼	.06¼	.06¼

Reds

Carmine No. 40

August 15, 1877, the price was $5.50 to $7; October 18, 1881, 5c. to 8c.; 1891, 8c.; 1901, $2.05 to $2.75; 1911, $2.30 to $2.50; 1913, $2.75 to $3; 1919, January, $6.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$5.25	$5.25	$6.00	$6.00
February	5.25	5.25	6.00	6.00
March	5.25	5.25	6.00	6.00
April	5.25	5.25	6.00	6.00
May	5.25	5.25	6.00	6.00
June	5.25	5.25	6.00	6.00
July	5.25	5.25	6.00	6.00
August	5.25	5.25	6.00	6.00
September	6.50	6.00	6.00	6.00
October	6.00	6.00	6.00	6.00
November	6.00	6.00	6.00	6.00
December	6.00	6.00	6.00	6.00
Year	6.50	5.25	6.00	6.00

Oxide Red, Copperas

May 13, 1907, the price was 2c. to 7½c.; October 18, 1911, 2¾c. to 10c.; 1913, 2¾c. to 10c.; 1918, July, 20c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04	$0.04	$0.04	$0.04
February	.04	.04	.04	.04
March	.04	.04	.04	.04
April	.04	.04	.04	.04
May	.04	.04	.04	.04
June	.04	.04	.04	.04
July	.04	.04	.04	.04
August	.04	.04	.04	.04
September	.04	.04	.04	.04
October	.04	.04	.04	.04
November	.04	.04	.04	.04
December	.04	.04	.04	.04
Year	.04	.04	.04	.04

Indian Red, American, Pure

September 8, 1880, the price was 1½c. to 1¾c.; October 18, 1881, 1¼c. to 1¾c.; 1891, 2¼c. to 4½c.; 1901, 3c. to 3¼c.; 1911, 1¼c. to 1⅝c.; 1913, 1½c. to 1⅝c.; 1919, January, 16c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10	$0.10	$0.10	$0.10
February	.10	.10	.10	.10
March	.10	.10	.10	.10
April	.10	.10	.10	.10
May	.10	.10	.10	.10
June	.10	.10	.10	.10
July	.10	.10	.10	.10
August	.10	.10	.10	.10
September	.10	.10	.10	.10
October	.10	.10	.10	.10
November	.10	.10	.10	.10
December	.10	.10	.10	.10
Year	.10	.10	.10	.10

Tuscan Red

August 15, 1877, the price was 20c. to 25c.; October 18, 1881, 11½c. to 13c.; 1891, 7c. to 10c.; 1901, 7c. to 10c.; 1911, 7c. to 10c.; 1913, 7c. to 10c.; 1921, November, 44c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.15	$0.15	$0.15	$0.15
February	.15	.15	.15	.15
March	.15	.15	.15	.15
April	.15	.15	.15	.15
May	.15	.15	.15	.15
June	.15	.15	.15	.15
July	.15	.15	.15	.15
August	.15	.15	.15	.15
September	.15	.15	.15	.15
October	.15	.15	.15	.15
November	.15	.15	.15	.15
December	.15	.15	.15	.15
Year	.15	.15	.15	.15

Venetian Red

October 18, 1871, the price was 2½c. to 3c.; 1881, 1¾c. to 1¾c.; 1891, 1¼c. to 1½c.; 1901, 1¾c. to 3c.; 1911, 1¼c. to 1¾c.; 1913, 1½c. to 1¾c.; 1920, November, 10c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.01½	$0.01½	$0.01¼	$0.01½
February	.01½	.01½	.01¼	.01½
March	.01½	.01½	.01¼	.01½
April	.01½	.01½	.01¼	.01½
May	.01½	.01½	.01¼	.01½
June	.01½	.01½	.01¼	.01½
July	.01½	.01½	.01¼	.01½
August	.01½	.01½	.01¼	.01½
September	.01½	.01½	.01¼	.01½
October	.01½	.01½	.01¼	.01½
November	.01½	.01½	.01¼	.01½
December	.01½	.01½	.01¼	.01½
Year	.01½	.01½	.01¼	.01½

English Vermilion

October 18, 1881, the price was $1 to $1.10; 1881, 54c.; 1891, 91c. to 95c.; 1901, 80c. to 90c.; 1911, 70c.; 1913, 70c.; 1919, January, $2.10.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.90	$1.75	$1.90	$1.85
February	1.75	1.75	1.85	1.85
March	1.85	1.75	1.85	1.85
April	1.85	1.85	1.85	1.85
May	1.85	1.75	1.85	1.85
June	1.80	1.75	1.85	1.85
July	1.85	1.80	1.85	1.85
August	2.00	1.80	1.90	1.85
September	1.95	1.85	1.90	1.90
October	1.90	1.85	1.90	1.90
November	1.90	1.85	1.90	1.90
December	1.90	1.90	1.90	1.90
Year	2.00	1.75	1.90	1.85

Yellows

Chrome Yellow, C.P.

October 18, 1871, the price was 22c. to 23c.; 1881, 10c. to 30c.; 1891, 10c. to 25c.; 1901, 10¼c. to 25c.; 1911, 12½c. to 13c.; 1913, 11c. to 13c.; 1918, March, 35c.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.16	$0.16	$0.16	$0.16
February	.16	.15½	.16	.16
March	.15½	.15½	.16½	.16
April	.15½	.15¼	.17	.17
May	.15¼	.15¼	.17	.17
June	.15¼	.15¼	.17	.17
July	.15¼	.15½	.17	.17
August	.15½	.15½	.17	.17
September	.15½	.15½	.17	.17
October	.15½	.15½	.17	.17
November	.15½	.15½	.17	.17
December	.15½	.15½	.17	.17
Year	.16	.15¼	.17	.16

Yellow Ocher, Domestic, Strong

October 18, 1871, the price was 1¼c. to 1½c.; 1881, 1¼c. to 1½c.; 1891, 1¾c. to 2¼c.; 1901, 1½c. to 2c.; 1911, 1½c. to 2c.; 1913, ⅜c. to ½c.; 1919, August, 5½c. per pound.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.01⅝	$0.01⅝	$0.01⅝	$0.01⅝
February	.01⅝	.01⅝	.01⅝	.01⅝
March	.01⅝	.01⅝	.01⅝	.01⅝
April	.01⅝	.01⅝	.01⅝	.01⅝
May	.01⅝	.01⅝	.01⅝	.01⅝
June	.01⅝	.01⅝	.01⅝	.01⅝
July	.01⅝	.01⅝	.01⅝	.01⅝
August	.01⅝	.01⅝	.01⅝	.01⅝
September	.01⅝	.01⅝	.01⅝	.01⅝
October	.01⅝	.01⅝	.01⅝	.01⅝
November	.01⅝	.01⅝	.01⅝	.01⅝
December	.01⅝	.01⅝	.01⅝	.01⅝
Year	.01⅝	.01⅝	.01⅝	.01⅝

French Ocher, Dark

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.02¾	$0.02¾	$0.02¾	$0.02¾
February	.02¾	.02¾	.02¾	.02¾
March	.02¾	.02¾	.02¾	.02¾
April	.02¾	.02¾	.02¾	.02¾
May	.02¾	.02¾	.02¾	.02¾
June	.02¾	.02¾	.02¾	.02¾
July	.02¾	.02¾	.02¾	.02¾
August	.02¾	.02¾	.02¾	.02¾
September	.02¾	.02¾	.02¾	.02¾
October	.02¾	.02¾	.02¾	.02¾
November	.02¾	.02¾	.02¾	.02¾
December	.02¾	.02¾	.02¾	.02¾
Year	.02¾	.02¾	.02¾	.02¾

Other Paint Materials

Casein

(Imported, bags, car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.18	$0.18	$0.16½	$0.15¼
February	.18	.17½	.16½	.16½
March	.16½	.16½	.16½	.15½
April	.16¾	.16	.16	.16
May	.16	.15¾	.15½	.15½
June	.16½	.15¾	.15½	.15¼
July	.16½	.16½	.15¼	.15¼
August	.16¾	.16½	.15½	.15¼
September	.17	.16¾	.16	.15¼
October	.16½	.16	.16	.16
November	.16¼	.15½	.16	.16
December	.15½	.15¼	.15½	.14½
Year	.18	.15¼	.16½	.14½

China Clay, Imported

October 18, 1871, the price was 2¼c. to 2½c. per pound; 1881, $14.50 to $21 per ton; 1891, $13 to $18; 1901, $12 to $17; 1911, $11 to $18; 1913, $11 to $18; 1918, August, $50.

	1928. H.	1928. L.	1929. H.	1929. L.
January	$15.00	$15.00	$15.00	$15.00
February	15.00	15.00	15.00	15.00
March	15.00	15.00	15.00	15.00
April	15.00	15.00	15.00	15.00
May	15.00	15.00	15.00	15.00
June	15.00	15.00	15.00	15.00
July	15.00	15.00	15.00	15.00
August	15.00	15.00	15.00	15.00
September	15.00	15.00	15.00	15.00
October	15.00	15.00	15.00	15.00
November	15.00	15.00	15.00	15.00
December	15.00	15.00	15.00	15.00
Year	15.00	15.00	15.00	15.00

China Clay, Domestic (Powdered)

November 30, 1891, the price was $9 to $12; October 18, 1901, $8.50 to $10; 1911, $8 to $9; 1913, $8 to $9; 1919, March, $25.

(F.o.b. point of production

	1928. H.	1928. L.	1929. H.	1929. L.
January	$10.00	$10.00	$10.00	$10.00
February	10.00	10.00	10.00	10.00
March	10.00	10.00	10.00	10.00
April	10.00	10.00	10.00	10.00
May	10.00	10.00	10.00	10.00
June	10.00	10.00	10.00	10.00
July	10.00	10.00	10.00	10.00
August	10.00	10.00	10.00	10.00
September	10.00	10.00	10.00	10.00
October	10.00	10.00	10.00	10.00
November	10.00	10.00	10.00	10.00
December	10.00	10.00	10.00	10.00
Year	10.00	10.00	10.00	10.00

Cobalt Oxide, Black

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.10	$2.10	$2.10	$2.10
February	2.10	2.10	2.10	2.10
March	2.10	2.10	2.10	2.10
April	2.10	2.10	2.10	2.10
May	2.10	2.10	2.10	2.10
June	2.10	2.10	2.10	2.10
July	2.10	2.10	2.10	2.10
August	2.10	2.10	2.10	2.10
September	2.10	2.10	2.10	2.10
October	2.10	2.10	2.10	2.10
November	2.10	2.10	2.10	2.10
December	2.10	2.10	2.10	2.10
Year	2.10	2.10	2.10	2.10

Shawnee
DRY COLORS
"Color Content Guaranteed"

Chrome Greens and Yellows Iron Blues
Para and Toluidine Reds Lake Colors
"National" Ultramarine Blue

KENTUCKY COLOR & CHEMICAL COMPANY
(INCORPORATED)
General Office and Works, LOUISVILLE, KENTUCKY
Offices and Agents in Principal Cities

Distillers of Coal Tar Products

Fuller's Earth, Powdered (Imported)

February 18, 1895, the price was 75c. to 80c. per 100 pounds; October 18, 1901, 75c. to 80c.; 1911, 80c. to 85c.; 1913, 80c. to 85c.; 1918, July, $2.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$25.00	$25.00	$25.00	$25.00
February	25.00	25.00	25.00	25.00
March	25.00	25.00	25.00	25.00
April	25.00	25.00	25.00	25.00
May	25.00	25.00	25.00	25.00
June	25.00	25.00	25.00	25.00
July	25.00	25.00	25.00	25.00
August	25.00	25.00	25.00	25.00
September	25.00	25.00	25.00	25.00
October	25.00	25.00	25.00	25.00
November	25.00	25.00	25.00	25.00
December	25.00	25.00	25.00	25.00
Year	25.00	25.00	25.00	25.00

Plaster of Paris (Barrels)

August 15, 1877, the price was $3; October 18, 1881, $1.75; 1891, $1.75 to $2; 1901, $1.75; 1911, $1.50 to $1.70; 1913, $1.50 to $1.75; 1920, November, $5.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.40	$3.40	$3.40	$3.40
February	3.40	3.40	3.40	3.40
March	3.40	3.40	3.40	3.40
April	3.40	3.40	3.40	3.40
May	3.40	3.40	3.40	3.40
June	3.40	3.40	3.40	3.40
July	3.40	3.40	3.40	3.40
August	3.40	3.40	3.40	3.40
September	3.40	3.40	3.40	3.40
October	3.40	3.40	3.40	3.40
November	3.40	3.40	3.40	3.40
December	3.40	3.40	3.40	3.40
Year	3.40	3.40	3.40	3.40

Putty, Commercial

October 18, 1871, the price in 12½-lb. tins was 3¾c. to 4¼c.; 1881, 2½c. to 2¾c.; 1891, 2⅜c. to 2½c.; 1901, 2¼c.; 1911, 1½c. to 2c.; 1913, 1 to 5-lb. tins, $1.50 to $1.90 per 100 pounds; 1918, July, $7.40.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.25	$3.25	$3.25	$3.25
February	3.25	3.25	3.25	3.25
March	3.25	3.25	3.25	3.25
April	3.25	3.25	3.25	3.25
May	3.25	3.25	3.25	3.25
June	3.25	3.25	3.25	3.25
July	3.25	3.25	3.25	3.25
August	3.25	3.25	3.25	3.25
September	3.25	3.25	3.25	3.25
October	3.25	3.25	3.25	3.25
November	3.25	3.25	3.25	3.25
December	3.25	3.25	3.25	3.25
Year	3.25	3.25	3.25	3.25

Terra Alba, American, No. 1

October 24, 1888, the price was 65c. to 70c.; October 18, 1891, $1; 1901, 65c. to 85c.; 1911, 75c. to 80c.; 1913, 75c. to 80c.; 1921, January, $2.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.15	$1.15	$1.15	$1.15
February	1.15	1.15	1.15	1.15
March	1.15	1.15	1.15	1.15
April	1.15	1.15	1.15	1.15
May	1.15	1.15	1.15	1.15
June	1.15	1.15	1.15	1.15
July	1.15	1.15	1.15	1.15
August	1.15	1.15	1.15	1.15
September	1.15	1.15	1.15	1.15
October	1.15	1.15	1.15	1.15
November	1.15	1.15	1.15	1.15
December	1.15	1.15	1.15	1.15
Year	1.15	1.15	1.15	1.15

Talc, American

November 30, 1891, the price was $1 to $1.25 per 100 pounds; October 18, 1901, 90c. to $1.10; 1911, $15 to $20 per ton; 1913, $15 to $20; 1918, July, $40.

(Bulk, f.o.b. mines)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$16.00	$16.00	$16.00	$16.00
February	16.00	16.00	16.00	16.00
March	16.00	16.00	16.00	16.00
April	16.00	16.00	16.00	16.00
May	16.00	16.00	16.00	16.00
June	16.00	16.00	16.00	16.00
July	16.00	16.00	16.00	16.00
August	16.00	16.00	16.00	16.00
September	16.00	16.00	16.00	16.00
October	16.00	16.00	16.00	16.00
November	16.00	16.00	16.00	16.00
December	16.00	16.00	16.00	16.00
Year	16.00	16.00	16.00	16.00

Whiting, Commercial

October 18, 1871, the price was 1c. per pound; 1881, 50c. to 55c. per 100 pounds; 1891, 70c. to 75c.; 1901, 40c. to 60c.; 1911, 45c. to 50c.; 1913, 45c. to 50c.; 1920, April, $1.40.

	Per 100 pounds			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.85	$0.85	$0.85	$0.85
February	.85	.85	.85	.85
March	.85	.85	.85	.85
April	.85	.85	.85	.85
May	.85	.85	.85	.85
June	.85	.85	.85	.85
July	.85	.85	.85	.85
August	.85	.85	.85	.85
September	.85	.85	.85	.85
October	.85	.85	.85	.85
November	.85	.85	.85	.85
December	.85	.85	.85	.85
Year	.85	.85	.85	.85

Varnish Gums

Congo, Water White

On February 8, 1909, the price was 30c. to 35c.; October 18, 1911, 30c. to 35c.; 1913, 30c. to 34c.; 1918, July, 45c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.37	$0.37	$0.37	$0.37
February	.37	.37	.37	.37
March	.37	.37	.37	.37
April	.37	.37	.37	.37
May	.37	.37	.37	.37
June	.37	.37	.37	.37
July	.37	.37	.37	.37
August	.37	.37	.37	.37
September	.37	.37	.37	.37
October	.37	.37	.37	.37
November	.37	.37	.37	.37
December	.37	.37	.37	.37
Year	.37	.37	.37	.37

Dammar, Batavia

October 18, 1871, the price was 13c.; 1881, 18c. to 21c.; 1891, 16c. to 18c.; 1901, 12½c. to 13½c.; 1911, 12½c. to 12¾c.; 1913, 20c. to 21c.; 1920, March, 60c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.23¾	$0.22½	$0.25	$0.24
February	.23½	.23	.23½	.22
March	.22¾	.22⅝	.23	.23
April	.22¾	.22¼	.23	.23
May	.22	.22	.23	.23
June	.22	.22	.23	.22½
July	.22	.22	.22½	.22½
August	.22	.22	.22½	.22
September	.22¼	.22¼	.22	.21¾
October	.24	.22¼	.21½	.21¾
November	.24½	.24	.21½	.21
December	.25	.24	.21	.19
Year	.25	.22	.25	.19

Kauri, Pale, No. 1

October 18, 1871, the price for ordinary to prime was 11c. to 12c.; 1881, 10c. to 15c.; 1891, 13½c. to 14½c.; 1901, 26c. to 30c.; 1911, 20c. to 24c.; 1913, 50c.; 1920, March, 60c.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.48	$0.48	$0.48	$0.48
February	.48	.48	.48	.48
March	.48	.48	.48	.48
April	.48	.48	.48	.48
May	.48	.48	.48	.48
June	.48	.48	.48	.48
July	.48	.48	.48	.48
August	.48	.48	.48	.48
September	.48	.48	.48	.48
October	.48	.48	.48	.48
November	.48	.48	.48	.48
December	.48	.48	.48	.48
Year	.48	.48	.48	.48

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Manila, Pale, Nubs

August 22, 1877, the price was 7½c. to 8c.; March 18, 1881, 10c. to 18c.; October 18, 1891, 17c. to 25c.; 1901, 14c. to 16c.; 1911, 15c. to 18c.; 1913, 15c. to 18c.; 1920, May, 30c.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.14	$0.14	$0.15½	$0.15¼
February	.14	.14	.15¼	.15¼
March	.14	.14	.15¼	.15¼
April	.14	.14	.15¼	.15¼
May	.14	.14	.15¼	.15¼
June	.14	.14	.15¼	.15¼
July	.14½	.14	.15¼	.15¼
August	.14½	.14½	.15¼	.15¼
September	.14¾	.14½	.15¼	.15¼
October	.15½	.15¼	.15¼	.15¼
November	.15¼	.15¼	.15¼	.15¼
December	.15¼	.15¼	.15¼	.15¼
Year	.15½	.14	.15½	.15¼

Pontianak, Nubs, No. 1

July 1, 1907, the price was 17c.; October 18, 1911, 12½c. to 13½c.; 1913, 13½c. to 15c.; 1919, December, 45c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.13½	$0.13½	$0.14	$0.14
February	.13½	.13½	.14	.14
March	.13½	.13½	.15	.14
April	.13½	.13½	.15	.15
May	.13½	.13½	.15	.15
June	.13½	.13½	.15	.15
July	.13½	.13½	.15	.15
August	.13½	.13½	.15	.15
September	.14	.14	.15½	.15
October	.14	.14	.15½	.15½
November	.14	.14	.15½	.15½
December	.14	.14	.15½	.15½
Year	.14	.13½	.15½	.14

Gilsonite

May 27, 1907, the price was 2½c. to 3½c. per pound; October 18, 1911, $36 to $50 per ton; 1913, $36 to $50; 1919, March, $60.

(Bags, f.o.b. works)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$49.50	$49.50	$33.00	$33.00
February	49.50	49.50	33.00	33.00
March	49.50	33.00	33.00	33.00
April	33.00	33.00	33.00	33.00
May	33.00	33.00	33.00	33.00
June	33.00	33.00	33.00	33.00
July	33.00	33.00	33.00	33.00
August	33.00	33.00	33.00	33.00
September	33.00	33.00	33.00	33.00
October	33.00	33.00	33.00	33.00
November	33.00	33.00	33.00	33.00
December	33.00	33.00	33.00	33.00
Year	49.50	33.00	33.00	33.00

Lacquer Materials

Butyl Alcohol

(In drums)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.19½	$0.19½	$0.17¾	$0.17¾
February	.19½	.1817	.17¾	.17¾
March	.18¼	.1817	.17¾	.17¾
April	.18¼	.18¼	.17¾	.17¾
May	.18¼	.18¼	.17¾	.17¼
June	.18¼	.18¼	.17¼	.17¼
July	.18¼	.18¼	.17¼	.17¼
August	.18¼	.18¼	.17¼	.17¼
September	.18¼	.18¼	.17¼	.17¼
October	.18¼	.18¼	.17¼	.17¼
November	.18¼	.18¼	.17¼	.17¼
December	.18¼	.18¼	.17¼	.17¼
Year	.19½	.1817	.17¾	.17¼

Butyl Acetate

(In drums)

	Per gallon			
	1928.		1929.*	
	H.	L.	H.	L.
January	$1.57	$1.57	$1.40	$1.40
February	1.57	1.57	1.42	1.37
March	1.47	1.47	1.37	1.37
April	1.47	1.47	1.37	1.37
May	1.45	1.45	1.37	1.37
June	1.38	1.38	1.37	1.37
July	1.38	1.38	.188	.188
August	1.42	1.38	.188	.188
September	1.26	1.33	.189	.189
October	1.35	1.35	.186	.186
November	1.35	1.35	.186	.184
December	1.40	1.40	.184	.184
Year	1.57	1.33	...	...

* Prices quoted per pound from July 1.

Butyl Propionate

(In drums)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.31	$0.31	$0.31	$0.31
February	.31	.27	.31	.31
March	.27	.27	.31	.31
April	.27	.27	.25	.25
May	.27	.27	.25	.25
June	.27	.27	.25	.25
July	.27	.27	.25	.25
August	.27	.27	.27	.25
September	.27	.27	.25	.25
October	.27	.27	.25	.25
November	.27	.27	.25	.25
December	.25	.25	.25	.25
Year	.31	.25	.31	.25

Cellulose Acetate

(In bags)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.25	$1.25	$1.20	$1.20
February	1.25	1.25	1.20	1.20
March	1.25	1.25	1.20	1.20
April	1.25	1.20	1.20	1.20
May	1.20	1.20	1.20	1.20
June	1.20	1.20	1.20	1.20
July	1.20	1.20	1.20	1.20
August	1.20	1.20	1.20	1.20
September	1.20	1.20	1.20	1.20
October	1.20	1.20	1.20	1.20
November	1.20	1.20	1.20	1.20
December	1.20	1.20	1.20	1.20
Year	1.25	1.20	1.20	1.20

Dibutyl Phthalate

(In drums)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.29½	$0.29½	$0.26½	$0.26½
February	.29½	.29½	.26½	.26½
March	.29½	.28	.26½	.26½
April	.28	.28	.26½	.26½
May	.28	.27½	.26½	.26½
June	.27½	.27½	.26½	.26½
July	.27½	.27½	.26½	.26½
August	.27½	.27½	.26½	.26½
September	.27½	.27½	.26½	.26½
October	.27½	.26½	.26½	.26½
November	.26½	.26½	.26½	.26½
December	.26½	.26½	.26½	.26½
Year	.29½	.26½	.26½	.26½

Ethyl Acetate Anhydrous

(In tanks)

	Per gallon			
	1928.		1929.*	
	H.	L.	H.	L.
January	$1.05	$1.05	$1.20	$1.20
February	1.05	1.05	1.20	1.20
March	1.05	1.05	1.20	1.20
April	1.05	1.05	1.20	1.15
May	1.05	1.00	1.15	1.15
June	1.02	1.02	1.10	1.10
July	1.02	1.02	1.10	1.10
			Per pound	
August	1.07	1.02	.147	.147
September	1.07	1.07	.147	.147
October	1.07	1.07	.147	.147
November	1.20	1.12	.147	.147
December	1.20	1.20	.147	.130
Year	1.20	1.00	..	..

* Prices quoted per pound from August 1.

Ethyleneglycol Monoethyl Ether

(In tanks)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.24	$0.21	$0.19	$0.19
February	.21	.21	.19	.19
March	.21	.21	.16	.16
April	.19	.19	.16	.16
May	.19	.19	.16	.16
June	.19	.19	.16	.16
July	.19	.19	.16	.19
August	.19	.19	.16	.16
September	.19	.19	.16	.16
October	.19	.19	.16	.16
November	.19	.19	.16	.16
December	.19	.19	.16	.16
Year	.24	.19	.19	.16

Nitrocellulose, Regular

(In drums)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.40	$0.40
February	.40	.40	.40	.40
March	.40	.40	.40	.40
April	.40	.40	.40	.40
May	.40	.40	.40	.40
June	.40	.40	.31	.31
July	.40	.40	.31	.31
August	.40	.40	.31	.31
September	.40	.40	.31	.31
October	.40	.40	.31	.31
November	.40	.40	.31	.31
December	.40	.40	.31	.31
Year	.40	.40	.40	.31

Tricresyl Phosphate

(In drums)

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.36	$0.36	$0.35	$0.35
February	.36	.36	.33	.33
March	.36	.36	.33	.33
April	.36	.36	.33	.33
May	.36	.36	.33	.33
June	.36	.36	.33	.33
July	.36	.35	.33	.33
August	.35	.35	.33	.33
September	.35	.35	.33	.33
October	.35	.35	.33	.33
November	.35	.35	.33	.33
December	.35	.35	.33	.33
Year	.36	.35	.35	.33

Glues

Cabinet

(Low grade)

October 18, 1871, the quotation for white glue was 35c. to 50c.; 1881, 15c. to 24c.; 1891, 14c. to 25c.; 1901, 18c. to 23c.; 1911, 18c. to 24c.; 1913, 13c. to 15c.; 1917, October, 17c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.20	$0.19	$0.22	$0.22
February	.20	.20	.22	.22
March	.21	.20	.22	.22
April	.21	.21	.22	.22
May	.21	.21	.22	.16
June	.21	.21	.16	.16
July	.21	.21	.16	.16
August	.21	.21	.16	.16
September	.21	.21	.16	.16
October	.21	.21	.16	.16
November	.21	.21	.16	.16
December	.22	.21	.16	.16
Year	.22	.19	.22	.16

Common Bone

October 18, 1871, the price was 18c. to 25c.; 1881, 8c. to 11c.; 1891, 7c. to 9c.; 1901, 6½c. to 8c.; 1911, 7½c. to 9c.; 1913, 7½c. to 9c.; 1917, August, 25c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.16½	$0.16	$0.17	$0.17
February	.16½	.16½	.17	.17
March	.17	.16½	.17	.17
April	.17	.17	.17	.17
May	.17	.17	.17	.12½
June	.17	.17	.12½	.12½
July	.17	.17	.13	.13
August	.17	.17	.13	.13
September	.17	.17	.13	.13
October	.17	.17	.13	.13
November	.17	.17	.13	.13
December	.17	.17	.13	.13
Year	.17	.16	.17	.12½

Extra White

November 1, 1876, the price was 38c.; October 18, 1881, 27c. to 35c.; 1891, 18c. to 25c.; 1901, 18c. to 23c.; 1911, 18c. to 24c.; 1913, 18c. to 24c.; 1917, November, 45c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.22	$0.22	$0.22	$0.22
February	.22	.22	.22	.22
March	.22	.22	.22	.22
April	.22	.22	.22	.22
May	.22	.22	.22	.22
June	.22	.22	.22	.22
July	.22	.22	.22	.22
August	.22	.22	.22	.22
September	.22	.22	.25	.22
October	.22	.22	.25	.25
November	.22	.22	.25	.25
December	.22	.22	.25	.25
Year	.22	.22	.25	.22

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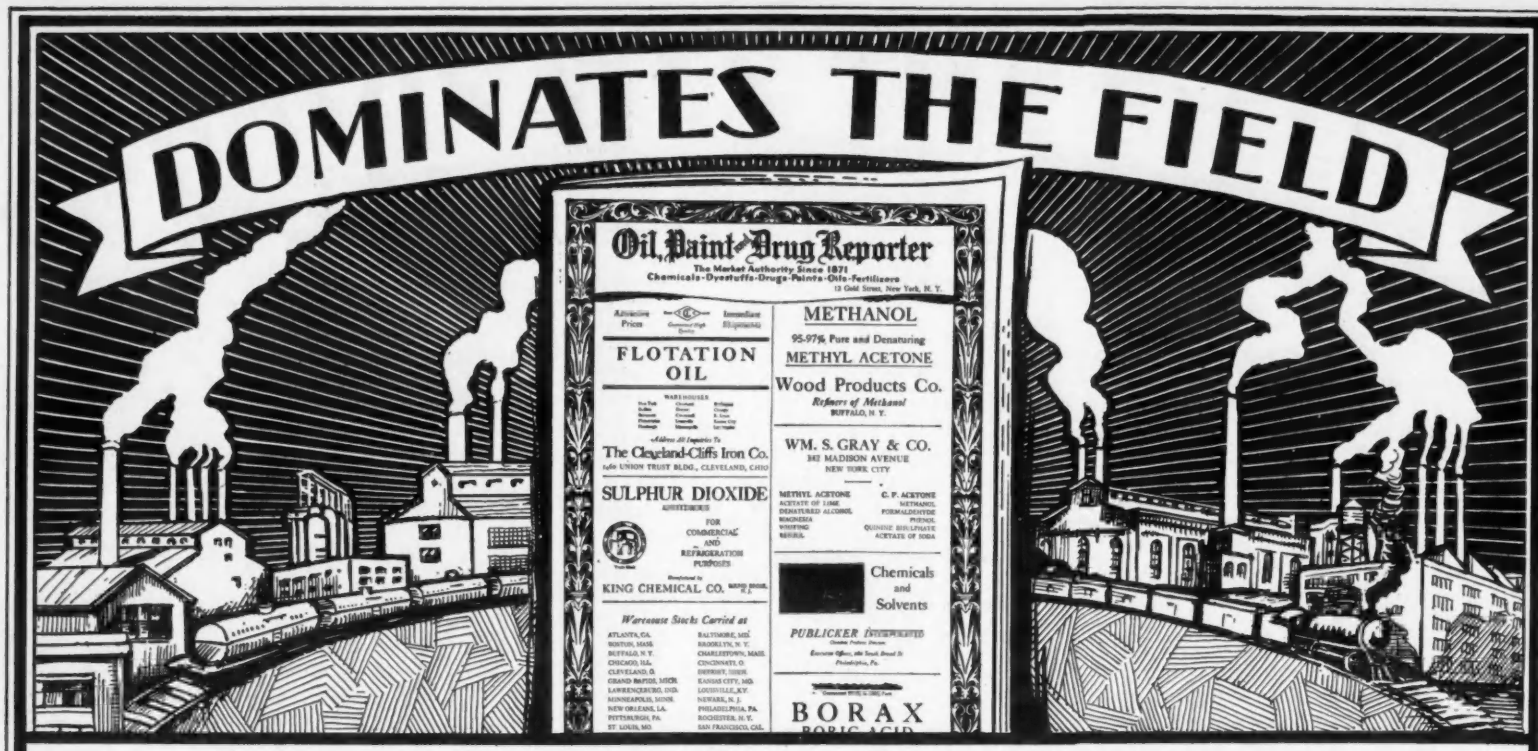

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Naval Stores: Market Review

Conservative transactions were the general rule in the market for naval stores during the year 1929. Although efforts were made to curtail production in many parts of the South, there was nothing to indicate that consumers were likely to experience difficulty in securing adequate supplies when they were needed, and there was little inclination on the part of buyers to operate extensively in advance of requirements. The movement into consuming channels was steady, however, and the consumption for the year in many industries was apparently well up to that of the previous year.

The export movement of rosin and turpentine during 1929 showed an increase in both the quantity and the value of the products exported. Although the increase was not great it was nevertheless gratifying to producers and dealers. Exports of gum turpentine during 11 months of the calendar year ended with November were about 3,200,000 gallons larger than in the same time in the previous year while the value showed an increase of $1,600,000. Exports of gum rosin during 11 months ended with November were about 275,000 barrels larger than in the same time in the previous year with an increase of $1,750,000 in the value. The exports of all naval stores products during 11 months of the year ended with November last were valued at $28,103,961 against $24,188,601 in the corresponding period in the previous year.

Prices here and in the South at the close of 1929 were lower than at the end of the previous year but prevailing sentiment was by no means pessimistic concerning the prospects for 1930. There was a feeling that better times were ahead for the industry especially as indications were not lacking that some branches of trade were beginning to recover from the setback resulting from the collapse in the stock market last fall. Moreover stocks of turpentine, rosin and other products of the pine tree in the hands of domestic consumers at the close of the year appeared to be small after many weeks of conservative buying and there was a rather general belief that supplies among consumers in foreign countries were also small.

Another encouraging feature of the situation at the close of last year from the viewpoint of sellers was the fact that stocks of turpentine and rosin in the principal seaboard markets were smaller than in the previous year despite the fact that arrivals in those markets from the opening of the season in April to the close of December ran well ahead of the corresponding period in the previous season. Stocks of turpentine at Savannah, Jacksonville and Pensacola at the end of 1929 aggregated 68,333 barrels against 90,384 barrels at the close of the previous year while stocks of rosin were 260,479 barrels against 282,667 barrels a year earlier.

The statistical position of naval stores in the interior of the South was also regarded as strong and steadily growing stronger. Abnormal weather conditions prevailed not a little of the time during November and December, temperatures falling considerably below normal with frequent heavy rains and in some sections snows. These conditions curtailed or stopped production at an earlier date than usual and stocks at the stills in many parts of the South at the close of the year were said to be much smaller than at the same time in the previous year. Receipts in primary markets were steadily diminishing as the year drew to a close with the indications pointing to a more marked shrinkage in the movement during the early weeks of 1930.

Turpentine prices in the local market had a downward trend much of the time, although there were occasional upturns, the changes being a reflection of the course of quotations in primary centers. The highest price touched during the year in the New York market was 63½c. per gallon, this figure being established in January. The lowest price, 51¼c. per gallon, was recorded in July. The range between the highest and the lowest prices of the year, 12¼c. per gallon, compared with a range of 10½c. per gallon in the previous year, the highest price recorded in the latter period being 62½c. per gallon and the lowest 52c. per gallon.

Rosin prices in the New York market moved within a range of about $1.25 to $3.25 per unit, according to grade, the highest prices being established early in the year. The highest quotation of the year on B rosin, $9.60 per unit, was recorded in January, while the lowest, $8.30 per unit, was recorded in April. These prices compared with $9.80 and $8, respectively, in the previous year. The range on WW rosin during the past year was $3.25 per unit, the highest price, $12.50 per unit, being reached in January while the lowest, $9.25 per unit, was touched in August. These prices compared with a high of $12.65 per unit and a low of $10.80 per unit in the previous year.

Quotations on minor naval stores moved within moderate limits, the trend being decided by the course of turpentine and rosin. Business was of a conservative character throughout the year, consumers being disposed, as a rule, to purchase merely for current requirements. Prices at the close of the year were in all instances below those prevailing at the opening of the period.

Turpentine

Although there were frequent fluctuations in gum turpentine in the local market during the past year, the changes were generally confined within comparatively small limits, the situation being similar in this respect to that of the previous year when the variations in prices were much smaller than in the two preceding years. At no time last year was there any of the excitement that featured the market at times in former years, trading last year being of a conservative character throughout the period.

The range between the highest and the lowest prices in the New York market during 1929 was 12¼c. per gallon. This compared with a range of 10½c. per gallon in the previous year, 37½c. per gallon in the year before that, and 29c. per gallon in 1927. The highest price recorded last year was 63½c. per gallon. This compared with 62½c. per gallon in the previous year. The lowest price established last year was 51¼c. per gallon, which compared with 52c. per gallon in the previous year. At the opening of last year the price was 63½c. per gallon. During the first half of the year the general trend was downward, the market dropping to 51½c. per gallon in June. There was a recovery in July to 53c. per gallon, the rally being brief. In the latter part of July there was a reaction to 51¼c., after which the market took an upward course and touched 57½c. per gallon in October. The trend was downward during the remainder of the year.

The course of steam distilled wood turpentine in the local market was himilar to that taken by gum turpentine. At the opening of the year wood turpentine in the New York market was 60c. per gallon. A downward trend soon developed and continued until July, when a price of 45c. per gallon was reached, showing a decline of 15c. per gallon. During the remainder of the year changes in quotations were narrow, 48c. per gallon being recorded in December. In the previous year the price range was 12c. per gallon, the highest quotation being 59c. per gallon and the lowest 47c. per gallon.

Purchasing of turpentine in the New York market was confined much of the time to comparatively small quantities, but the demand for such lots was steady and at no time was there an accumulation of burdensome supplies here. A noteworthy feature of the situation late in the year was that buying orders received here were accompanied in not a few instances by requests for prompt shipment. This was regarded as an indication that stocks in the hands of consumers were unusually small, and it also had a tendency to strengthen the belief that prospects for the ensuing year were favorable so far as consumption was concerned, especially as reports in regard to the condition of general business in this country were improving.

The statistical position of turpentine at the close of the year was regarded as strong. Stocks in the three principal seaboard markets in the South were smaller than at the end of the previous year despite a material increase in receipts in those markets, as compared with the preceding season. Stocks at stills at many points in the interior were also said to be smaller than in the previous season.

Rosin

The stringency of pale grades that featured the rosin situation in 1928 was lacking much of the time last year, the proportion of these grades in the receipts being nearer normal than in recent preceding years. Quotations on the pale grades last year covered a wider range than in the previous season. The range between the highest and the lowest prices for dark rosins last year was about the same as in the previous year.

The highest price recorded for B rosin in the New York market during 1929 was $9.20 per unit, and the lowest $7.30, the former being established in January and the latter in April. In the previous year the high, $9.80 per unit, was reached in July and the lowest, $8 per unit, in May. Quotations on I rosin covered a range of $1.35 per unit, the highest being $9.70 per unit and the lowest $8.35. This compared with $10.35 and $8.90, respectively, in the previous year. The price range on K rosin last year was $1.45 per unit, which compared with a range of $1.40 in the previous season.

Quotations on W W rosin last year covered a range of $3.25 per unit, which compared with a range in the previous year of $1.85 per unit. In January last year W W rosin sold at $12.50 per unit. The course of the market was generally downward during the next seven months, a price of $9.25 per unit being established in August. During the remainder of the year changes in quotations were small, the range between the highest and the lowest prices recorded during the last four months of the period being only 45 cents per unit.

An interesting development during the last quarter of the year was an increase in the exports, Savannah and Jacksonville on several occasions reporting extremely heavy clearances for European countries. Stocks in primary markets decreased steadily during the closing weeks of 1929, supplies in the three principal seaboard markets at the year end being about 20,000 barrels smaller than at the close of the previous year, although receipts in those markets from the opening of the season to the end of December were materially larger than in the corresponding period in the previous season.

A noteworthy event during the year was the announcement by a well-known producer of wood rosin that it was ready for the first time in the history of the trade to supply this product in wooden barrels on a net weight basis. As the new plan enabled the producer, it was stated, to furnish a package consisting of more rosin and less wood, it was expected that the innovation would result in a considerable saving for consumers of wood rosin.

Minor Naval Stores

Pine oil prices moved within narrow limits during the past year, the range between the highest and the lowest quotations being 3 cents per gallon, or the same as in the previous year. The highest price recorded last year was 66c. per gallon and the lowest 63c. This compared with 69c. and 66c., respectively, in the previous year. Demand was of a conservative character, but the movement into consuming channels was apparently as large as in recent preceding years.

The highest price recorded for pitch last year was $7.50 per barrel, and the lowest $7 per barrel, showing a range of 50 cents per barrel, which compared with a range of $1 per barrel in the previous year, when the highest price recorded was $8 per barrel and the lowest $7.

Changes in rosin oil were frequent The range between the highest and the lowest quotations of the year on first rectified was 6½c. per gallon. In the previous year the highest price was 62c. per gallon and the lowest 53c., showing a range of 9c. per gallon.

Tar covered a range of $1 per barrel, the highest price recorded during the year being $12.50 per barrel and the lowest $11.50 per barrel. This compared with $12.50 per barrel in the previous year, when prices were stationary throughout the period. At the close of last year the market was firm, owing to smallness of supplies.

Naval Stores: Record of Prices

Turpentine

Turpentine, Gum Spirits

October 18, 1871, the price was 71c. to 73c.; 1881, 52c. to 53c.; 1891, 37c. to 37½c.; 1901, 38c. to 38½c.; 1911, 51c.; 1913, 45c. to 45½c.; 1920, April, $2.65.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.62	$0.57½	$0.63½	$0.60½
February	.61	.60	.60	.57
March	.62½	.60	.60	.56½
April	.60	.55	.56	.53¼
May	.55	.53	.54½	.53⅜
June	.59	.53	.53	.51½
July	.57	.55	.53	.51¼
August	.54	.53½	.52	.51½
September	.54½	.52	.55	.52½
October	.54½	.52¼	57½	.55
November	.61	.55	.55	.53
December	.61½	.60	.54½	.52½
Year	.62½	.52	.63½	.51¼

Turpentine, Wood, Steam Distilled

May 13, 1907, the price was 63½c.; October 18, 1911, 50c.; 1913, 30c. to 35c.; 1920, June, $2.30.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.58	$0.52	$0.60	$0.58
February	.57	.57	.57	.54
March	.58	.57	.54	.53
April	.56	.51	.53	.46
May	.51	.49	.46	.46
June	.54	.49	.46	.46
July	.54	.52	.48½	.45
August	.52	.50	.49	.48½
September	.49	.47	.51	.49
October	.49	.48	.51	.50
November	.56	.51	.50	.49
December	.59	.58	.50	.48
Year	.59	.47	.60	.45

Rosins

Rosin, Grade B

October 18, 1871, the price was $4.10 to $4.17½; 1881, $2.50 to $2.52½; 1891, $1.32½ to $1.35; 1901, $1.42; 1911, $6.90; 1913, $3.95 to $4.25; 1920, May, $20.

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$9.65	$8.95	$9.20	$8.35
February	9.35	8.70	8.45	8.20
March	9.00	8.75	8.25	7.75
April	8.70	8.30	7.50	7.30
May	8.20	8.00	7.55	7.50
June	9.50	8.10	8.00	7.50
July	9.80	9.65	8.65	8.15
August	9.65	9.55	8.65	8.55
September	9.50	9.00	9.20	8.75
October	9.30	9.20	9.37½	9.20
November	9.60	9.30	8.95	8.70
December	9.70	9.15	8.52½	8.25
Year	9.80	8.00	9.20	7.30

Rosin, Grade I

February 15, 1881, the price was $2.50; October 18, 1881, $7.50; 1891, $2; 1901, $1.75; 1911, $7.10; 1913, $4.10 to $4.15; 1919, September, $21.25.

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$10.35	$9.30	$9.70	$9.30
February	9.80	9.65	9.40	9.30
March	10.20	9.90	9.50	9.20
April	9.95	9.50	8.90	8.45
May	9.30	9.00	8.50	8.45
June	9.90	8.90	8.45	8.35
July	10.10	9.90	8.82½	8.50
August	9.90	9.75	8.72½	8.65
September	9.60	9.15	9.20	8.80
October	9.50	9.30	9.42½	9.25
November	9.80	9.50	9.10	8.72½
December	9.95	9.40	8.65	8.37½
Year	10.35	8.90	9.70	8.35

Rosin, Grade K

February 15, 1881, the price was $2.75; October 18, 1891, $2.20; 1901, $2.30; 1911, $7.15; 1913, $4.70 to $4.80; 1919, July, $22.75.

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$10.40	$9.50	$9.90	$9.45
February	9.90	9.65	9.50	9.40
March	10.25	9.95	9.50	9.30
April	10.10	9.60	8.95	8.50
May	9.40	9.10	8.50	8.50
June	9.95	9.00	8.50	8.45
July	10.15	9.90	8.90	8.55
August	9.90	9.80	8.75	8.65
September	9.65	9.20	9.20	8.85
October	9.60	9.40	9.42½	9.27½
November	9.85	9.55	9.12½	8.77½
December	9.95	9.70	8.67½	8.50
Year	10.40	9.00	9.90	8.45

Rosin, Grade WW

January 21, 1885, the price was $5; October 18, 1891, $4; 1901, $4.10; 1911, $8; 1913, $6.95 to $7.10; 1919, September, $25.50.

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$12.65	$12.20	$12.50	$12.35
February	12.40	11.60	12.35	12.30
March	11.75	11.55	12.20	11.60
April	11.55	11.10	10.30	10.00
May	11.00	10.85	10.15	10.05
June	11.70	10.80	9.95	9.65
July	11.90	11.50	9.75	9.65
August	11.50	11.25	9.65	9.25
September	10.95	10.80	9.60	9.40
October	11.45	10.80	9.80	9.65
November	12.25	11.65	9.85	9.70
December	12.45	12.35	9.85	9.75
Year	12.65	10.80	12.50	9.25

Other Naval Stores

Pine Oil, Steam Distilled

June 13, 1912, the price was 35c. to 45c.; October 18, 1913, 35c. to 45c.; 1920, July, $2.10.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.68	$0.68	$0.66	$0.65
February	.68	.68	.65	.64
March	.68	.68	.64	.63
April	.68	.68	.65	.63
May	.68	.67	.65	.65
June	.69	.67	.65	.65
July	.69	.68	.64	.64
August	.68	.68	.64	.64
September	.66	.66	.64	.64
October	.66	.63	.64	.64
November	.66	.66	.64	.64
December	.66	.66	.64	.63
Year	.69	.66	.66	.63

Pitch

October 18, 1871, the price was $4 to $4.25; 1881, $2.25 to $2.30; 1891, nominal; 1901, $1.60 to $1.75; 1911, $4 to $4.50; 1913, $4.25 to $4.50; 1920, June, $15.

	Per barrel			
	1928.		1929.	
	H.	L.	H.	L.
January	$7.50	$7.50	$7.50	$7.50
February	7.50	7.50	7.50	7.50
March	7.50	7.50	7.50	7.50
April	7.50	7.00	7.50	7.50
May	7.00	7.00	7.50	7.50
June	7.00	7.00	7.50	7.50
July	7.00	7.00	7.50	7.50
August	7.00	7.00	7.50	7.50
September	8.00	7.00	7.50	7.50
October	8.00	8.00	7.50	7.50
November	8.00	8.00	7.50	7.50
December	8.00	7.50	7.50	7.00
Year	8.00	7.00	7.50	7.00

(Continued on page 109)

Oils, Fats, and Greases: Market Review

The drift of quotations on animal, vegetable and fish oils, fats and greases was downward in the main during 1929, prices at the close of the year in many cases being the lowest recorded during the period. The downward trend of values was traceable in no small measure to the attitude of buyers, many consumers adhering closely throughout the year to a hand to mouth policy in making purchases. Consumption of many products in 1929 was apparently no smaller than in recent preceding years, but the practice of purchasing merely for current requirements was reflected in keen competition for business.

As a result of these conditions there was a noticeable absence during the past year of the periods of excitement noted from time to time in previous years. Even chinawood oil was no exception to the general rule, trading in that commodity being unusually quiet, with price movements confined within small limits.

At the opening of last year the Oil, Paint and Drug Reporter's index number for twenty-three representative oils, fats and greases was 145.9, which compared with 147.9 at the opening of the previous year and with a normal of 100 in August, 1914, when the world war commenced. At the close of last year the index number was 128.5 as compared with 146.1 at the end of the previous year. The highest index number last year was 147.2, this being recorded late in February. It compared with a high in the previous year of 148.4. The lowest index number last year was 128.5, which compared with a low in the previous year of 135.0.

Changes in the index number during the first two months of 1929 were small, the low for the period being 145.9 and the high 147.2, the latter being recorded February 25. Early in March prices developed a downward trend, which continued with practically no interruption till the close of the first half of the year. At the end of March the index number had fallen to 146.5, at the close of April to 141.3, at the end of May to 131.6 and at the close of June to 129.3.

During the third quarter of last year the market had an upward trend at times, though changes in the index number were small. At the close of July the index number had moved upward to 130.7. It advanced in the first week of August to 131.1, but by the end of the month it had declined to 130.6. In September the trend of the market was upward, the index number being 130.7 at the opening of that month and 131.8 at the close. During the last quarter of the year the course of prices was downward. At the opening of October the index number was 131.5 and at the close of that month 130.5. At the opening of November the index number was 129.8 and at the close 129.2. In the final month of the year the index number was 128.9 at the opening and 128.5 at the close.

Although the markets for chinawood oil here and on the coast were unusually tame during 1929, the situation did not lack features of interest. Fluctuations in prices, though narrow, were frequent, with a range between the highest and the lowest quotations of the year of 2c. per pound here and 2½c. per pound on the Pacific Coast. Coconut oil prices moved within a range of 1¾c. to 1⅞c. per pound, the highest quotations prevailing early in the year.

Trading in refined cottonseed oil futures in the local market was quiet throughout the year, the total transactions on the New York Produce Exchange showing a decrease of about 2,000,000 barrels as compared with the previous year. This marked slump in operations was apparently due largely to the great activity at rising prices in the stock market, which had a tendency to keep speculation in commodities of all sorts down to unusually small proportions.

A sharp rise occurred in linseed oil owing to a violent advance in domestic and foreign flaxseed markets following widespread damage ot the crop in this country by prolonged drought. The highest quotations of the year on linseed oil were established early in October. The rise had the effect of checking demand and late in the year prices reacted rather sharply, flaxseed prices also receding. The setback in flaxseed quotations was due in part to the approach of new crop supplies from Argentina, though the indications pointed to a decrease in the crop of that country as compared with the previous year.

Tallow was the leading feature of the market for animal products during the past year. Prices were high in the early months of the year, but there was a reaction during the spring and summer months owing to a falling off in demand, after which prices again took an upward course, the market at the close of the year being about one cent a pound above the lowest prices of the period. Stearic acid makers received good prices for their product throughout the year, the lowest quotations of the period being well above the lowest prices of the previous year. Menhaden oil was in comparatively light supply last year, fishing being poor much of the time, with the indications at the close of the year pointing to a rather sharp decrease in production for the season as compared with the previous year.

Sentiment in oil trade circles at the close of the year regarding the prospects for 1930 was rather optimistic despite the quietness of business and downward trend of prices during 1929. This feeling was largely traceable to indications that some branches of trade were recovering from the depression experienced after the collapse in the stock market in the fall of last year. Also there was an absence of burdensome supplies in the hands of manufacturers and dealers, while the belief existed that consumers of many oils and fats were carrying very limited stocks after a prolonged period of hand to mouth buying.

Comparative Values

Oil, Paint and Drug Reporter's index numbers, based on 100 as the average price of twenty-three representative oils and fats in August, 1914, ranged as follows by quarters over 1929:—

Jan. 1	April 1.	July 1.	Oct. 1.	Dec. 31.
145.9	146.0	129.5	131.8	128.5

Vegetable Oils

Chinese advices concerning political, labor and transportation conditions were frequently of an unfavorable character during the past year, but they had comparatively little influence as market factors in this country. Although there was a steady movement of chinawood into consuming channels, purchasing was generally along conservative lines throughout the year, there apparently being no fear of a serious curtailment of supplies as a result of disturbed political conditions in China. Price movements were within comparatively small limits during the year, the range between the highest and the lowest quotations on the Pacific Coast being 2½c. per pound which compared with a range of 3¼c. per pound in the previous year. In 1927 the range was about 15c. per pound, while in the year before that it was 32c. per pound. The lowest prices last year prevailed late in the period when the markets were depressed by a break in Chinese exchange, due to a fall in silver. Also, stocks of oil in this country late in the year were comparatively large and liberal supplies were reported to be afloat for American markets. According to official statistics, exports from Hankow to the United States in December were more than 10,000,000 pounds, against 2,325,000 in the previous month and 6,870,000 pounds in December in the previous year, while the total exports to this country during 1929 were 103,563,625 pounds, as compared with 100,285,595 pounds in 1928. Stocks in Hankow at the close of last December were 1,700 tons, against only 300 tons a year earlier.

Coconut oil prices covered a range of 1¾c. to 1⅞c per pound last year which compared with a range of ½c. to ¾c. per pound in the previous year. The highest prices last year were recorded during the first quarter when the strength of the Far Eastern markets for copra and coconut oil was the dominant factor and when supplies of oil in this country were below normal. Early in the second quarter of last year a weaker tone developed in domestic markets for oil owing to a downward trend in competing products and a slowing down of trade, the course of domestic markets having an influence upon copra and coconut oil abroad. At the close of last year the price of Manila oil in tank cars on the Pacific Coast was 1⅝c. per pound lower than at the end of the previous year.

Crude corn oil at the mills moved within a range of 2c. per pound in tankcars, as compared with a range of 1¾c. per pound in the previous year, the highest prices last year prevailing early in the period and the lowest during the summer when competing product displayed weakness and when the market for corn was influenced by favorable reports concerning the growing crop.

Quotations on olive oil foots covered an unusually wide range last year, the highest price for spot supplies in the New York market being 11½c. per pound and the lowest 8c. per pound. The highest prices of the year ruled early in the period when there was a shortage of supplies, imports having been checked by an advance in the markets abroad. During the latter part of the first quarter of last year a downward trend developed owing to weakness in competing product and cheaper offerings from abroad. The lowest price of the year was established late in the period, 8c. per pound being quoted in November and December. In the previous year the low was 9½c. per pound.

Denatured olive oil prices covered a range last year of 38c. per gallon, which compared with a range of 20c. per gallon in the previous year. The high last year, $1.30 per gallon compared with a high in the previous year of $1.40 per gallon, while the low last year, 92c. per gallon, compared with a low in the previous year of $1.20 per gallon. Last year the market here, after displaying firmness in the first quarter of the period, became weak during the second quarter and the trend of prices was downward during the remainder of the year, the decline being due to freer and cheaper offerings from abroad and the quietness of trade here.

Palm oil sold at comparatively high prices during the first quarter of last year, but early in the second quarter the market developed a downward trend which was not checked until late in the year. Prices covered a range of 2¼c. per pound. The high for the year was 9½c. per pound and the low 7¼c. per pound, which compared with 9¼c. and 7⅝c., respectively, in the previous year. A development of interest during the year was the merger of two of the largest palm oil producers in the industry.

Perilla oil prices covered a rather wide range during the year, the highest price being 18c. per pound, and the lowest 13½c. per pound. The high prices were due to a shortage of supplies, the markets here and on the Coast being practically bare of stocks at times during the fall months. Refined rapeseed oil covered a range of 13c. per gallon. The high last year was 86c. per gallon and the low 73c. per gallon, which compared with 91c. per gallon and 79c. per gallon, respectively, in the previous year. Shipments of rapeseed from India to the United Kingdom and the Continent last year were about 25,000 tons smaller than in the previous year. Crop reports from India and Europe late in the year were rather unfavorable.

Cottonseed Oil

The year 1929 in the market for cottonseed oil was featured by a marked falling off in speculative operations, the total transactions on the New York Produce Exchange for the year amounting to only 2,630,900 barrels. This compared with 4,603,900 barrels in 1928. The decrease in trading in cottonseed oil was due largely to the great activity at rising prices in the market for securities which had a tendency to cut down speculation in all commodities. Commission house participation in the cottonseed oil speculation was on the smallest scale witnessed for many years past. The fact that at no time during the season was there a prospect of inadequate supplies of oil for the needs of consuming trades also had a tendency to keep the speculative public out of the market.

At one time early in the year crude and refined oil prices were slightly higher than in the previous season, but later on the markets here and in the South took a downward course, especially as the trend of the markets for cotton and lard was also downward. The highest price recorded for cash refined oil in the New York market last year was 10.90c. per pound, and the lowest 8.40c. per pound. These prices compared with 10.70c. per pound, and 8.50c. per pound, respectively, in the previous year. The high for crude oil in the Southeast last year was 9.25c. per pound, and the low 7c. per pound, these prices comparing with 9c. and 7.62½c., respectively, in the previous year.

There was a steady movement of oil into consuming channels during the past year despite the dullness of speculation in the local market for refined oil futures. Trade in lard compound held up well although purchasing was of a conservative character throughout the year and makers of lard compound were steady buyers of cottonseed oil in the market here. The fact that pure lard last year sold at lower prices than were recorded in the previous year apparently had little effect upon the consumption of cottonseed oil in this country, although exports last season were considerably smaller than in the previous season, the decrease in foreign trade being traceable in part to a drop in takings by Canadian consumers who secured the bulk of their supplies from English refiners.

Production of cottonseed last season was estimated by the government at 6,630,000 tons, against 6,452,000 in the previous season. The final government estimate of the cotton crop last season was 14,919,000 bales, which compared with a production in the previous season of 14,478,000 bales. The quantity of cotton ginned for the season up to December 1, 1929, was 12,857,981 bales, against 12,560,154 bales in the corresponding period in the previous season and 11,638,338 bales in the season before that.

Receipts of cottonseed at the mills last season were 5,082,051 tons, against 4,586,705 tons in the previous season, while the quantity crushed was 5,058,744 tons, against 4,654,017 tons. Production of crude oil during the past season was 1,603,352,111 pounds, against 1,476,609,401 pounds in the previous season; refined oil, 1,457,864,507 pounds, against 1,311,509,019 pounds. The total consumption of refined oil last season was 3,638,864 barrels, against 3,396,865 barrels in the previous season. The visible supply in the form of seed and crude and refined oil at the close of last season was 919,000 barrels, against 903,014 barrels at the end of the previous season.

Flaxseed and Linseed Oil

The trend of flaxseed and linseed oil values was upward much of the time in 1929, especially during the summer and fall when prices advanced sharply. At one time cash flaxseed in the Minneapolis market was nearly $1 per bushel above the highest price recorded in the previous year. The range between the highest and the lowest prices last year in Minneapolis was $1.16 per bushel which compared with a range of 44½ cents per bushel in the previous year. The high in the Minneapolis market last year, $3.44 per bushel, was established in September. It compared with a high of $2.47 per bushel in November of the previous year. The low last year was $2.28 per bushel, which compared with $2.02¼ per bushel in the previous year.

Linseed oil in the local market moved within a range of 6.3 cents per pound, the highest price, 16.3c. per pound, being reached in September and again in October, while the lowest price, 10c. per pound, was recorded in January. In the previous year the highest price was 10.4c. per pound and the lowest 9.4c. per pound, the range between the highest and the lowest price that year being unusually narrow, although there were frequent fluctuations in seed prices throughout the season.

The sharp rise in flaxseed and linseed oil prices last year was due mainly to a decrease in the crop of seed in this country. The area seeded in the United States last spring was 3,092,000 acres, which compared with an area of 2,831,000 acres in the previous season. On July 1 the government put the indicated crop at 19,885,000 bushels, but a marked shortage of moisture during the summer caused the crop to deteriorate and on November 1 the official estimate of the yield was only 16,060,000 bushels. This compared with a crop in the previous season of 18,690,000 bushels and with an average for five years of 23,243,000 bushels. The 1929 production of flaxseed in fifteen countries which made returns up to the close of the year aggregated 91,705,000 bushels as compared with 122,775,000 bushels in 1928

According to preliminary census figures, stocks of flaxseed at linseed oil mills in this country on December 31, 1929, were 121,782 tons compared with 214,578 tons on the same date in the previous year, 252,554 tons in the year before that and 179,324 tons in 1926. Stocks of linseed oil on December 31, 1929, as reported by crushers, were 99,738,526 pounds against 120,724,853 pounds at the close of the previous year, 152,980,476 pounds in 1927 and 129,437,691 pounds in 1926.

Animal Fats and Oils

Tallow brought good prices during the first quarter of last year, the high for the period being 9⅛c. per pound for special and the low 8½c per pound. The trend of the market was downward during the second quarter with a steadier tone during the third and fourth quarters, the price at the close of the year being about one cent a pound above the lowest recorded during the period. The lowest price recorded during the past year was 1⅜c. per pound under the lowest price touched in the previous year. Consumption of tallow last year was apparently well up to normal, there being a shortage of supplies on spot at times.

Cash lard prices covered a range of about 2 cents per pound during the past year or practically the same range as in the previous year. The highest price recorded for city lard last year, however, was ½c. per pound under the high of the previous year, while the lowest price touched last year was ¾c. per pound below the low of the previous year. Exports of lard at one time last year showed a considerable falling off as compared with the previous season, but the movement increased during the latter part of last year, shipments to England and the Continent gaining during the last quarter.

Grease sold at high prices during the first quarter of 1929, but the trend of prices was downward much of the time during the remainder of the year, the lowest quotations prevailing in December. The range between the highest and the lowest prices of the year was 2⅜c. per pound, which compared with a range of 1½c. per pound in the previous year. Oleo stearin also sold at high prices in the early months of last year with the drift of quotations downward later on.

Trade in animal oils was of a routine character throughout last year and at no time were there developments of more than ordinary interest. The highest price recorded for extra No. 1 lard oil was $13.25 per 100 pounds, or the same as in the previous year, while the lowest price touched last year, $12 per 100 pounds, compared with a low of $11.50 per 100 pounds in 1928.

Fish Oils

Menhaden oil was quiet throughout the year despite a further decrease in production, buyers withdrawing from the market when producers, favored by a small catch of fish, were inclined to advance prices. Fishing operations were hampered by unfavorable weather with frequent storms. Prices in the Baltimore market ranged from 42 to 50 cents per gallon in tank cars which compared with a range of 40 cents to 50 cents per gallon in the previous year. Refined menhaden oil in the local market brought comparatively high prices, light pressed rising to 71c. per gallon in cooperage as compared with a high in the previous year of 62c. per gallon.

Newfoundland cod oil in the local market covered a range of 6c. per gallon, the highest prices ruling during the first quarter when the range was from 64c. to 65c. per gallon. Trade was quiet, however, and later on offerings from primary shippers increased with a depressing effect upon values. At the close of the year 59c. per gallon was the prevailing quotation here as compared with 65c. per gallon at the end of the previous year.

Sperm oil was steady throughout the year, prices being without change Consumption was apparently up to normal, but the market here presented a very quiet appearance. The local market for refined whale oil was also quiet at steady prices. A slight decline occurred in crude whale oil on the Pacific Coast, although the market was practically bare of offerings much of the time.

Animal, Fish, Vegetable Oils: Record of Prices

Vegetable Oils

Chinawood Oil

February 4, 1905, the price was 6c. to 6¼c.; October 18, 1911, 8¾c. to 9c.; 1913, 7¼c. to 7½c.; 1918, July, 32c.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.17	$0.15½	$0.14⅝	$0.14⅝
February	.17	.15⅞	.14⅝	.14½
March	.14⅝	.14	.14½	.14
April	.15⅝	.14⅝	.14½	.14⅛
May	.15	.14½	.14⅜	.14⅝
June	.15	.14⅜	.14½	.14
July	.15½	.14⅜	.14⅜	.14¼
August	.15½	.14⅜	.14¼	.14⅛
September	.15¼	.14½	.15	.14¼
October	.15½	.15¼	.15½	.15
November	.15	.14⅜	.15¼	.14½
December	.14⅜	.14½	.14½	.13½
Year	.17	.14	.15½	.13½

Chinawood Oil

(Pacific Coast; tankcars; prompt shipment)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.15½	$0.13⅜	$0.14	$0.13⅜
February	.15	.14½	.13⅜	.12⅜
March	.13	.12¼	.13⅛	.12⅝
April	.13⅜	.12⅜	.13⅝	.13
May	.13½	.12⅜	.13⅜	.13⅜
June	.13	.12½	.13½	.12⅝
July	.14¼	.12⅞	.13⅝	.13
August	.14¼	.13⅜	.13½	.12⅝
September	.13⅜	.13¼	.14½	.12⅝
October	.14⅜	.13⅞	.14	.13½
November	.13⅝	.13	.13½	.12⅝
December	.13½	.13	.12½	.12
Year	.15½	.12¼	.14½	.12

Coconut Oil, Manila

October 23, 1918, the price was 15¾c. to 16c.; 1919, July, 20¾c.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¾	$0.09¾	$0.09⅝	$0.09⅝
February	.09¾	.09⅝	.09⅝	.09⅝
March	.09¾	.09⅝	.09½	.09
April	.09⅝	.09⅜	.09	.08⅞
May	.09⅝	.09⅝	.08¾	.07⅞
June	.09⅜	.09⅝	.07⅞	.07⅞
July	.09⅜	.09⅜	.08⅛	.07⅞
August	.09⅜	.09¼	.07⅞	.07⅞
September	.09½	.09¼	.08¼	.07⅞
October	.09¼	.09¼	.08¼	.08¼
November	.09¼	.09¼	.08¼	.08¼
December	.09⅝	.09½	.08¼	.08¼
Year	.09¾	.09¼	.09⅝	.07⅞

Coconut Oil, Ceylon, Domestic

August 14, 1916, the price was 12¾c. to 13c.; 1919, July, 20¾c.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¾	$0.09¾	$0.09⅝	$0.09⅝
February	.09¾	.09¾	.09⅝	.09⅝
March	.09¾	.09¾	.09⅝	.09⅛
April	.09⅝	.09¾	.09⅛	.08⅞
May	.09¾	.09¾	.08⅝	.07⅞
June	.09¾	.09¾	.07⅞	.07⅞
July	.09⅝	.09⅝	.08⅛	.07⅞
August	.09½	.09⅝	.07⅞	.07⅞
September	.09⅝	.09⅝	.08¼	.07⅞
October	.09⅝	.09⅝	.08¼	.08¼
November	.09⅝	.09½	.08¼	.08¼
December	.09⅝	.09½	.08⅛	.08⅛
Year	.09¾	.09⅝	.09⅝	.07⅞

Coconut Oil, Manila *(F.o.b. Pacific Coast)*

(In tankcars)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08⅝	$0.08⅝	$0.08	$0.07⅞
February	.08¾	.08	.07⅞	.07⅞
March	.08⅝	.08⅛	.08⅛	.08
April	.08⅝	.08¼	.07⅝	.07⅝
May	.08⅝	.08⅛	.07½	.07⅛
June	.08¼	.08	.06½	.06½
July	.08⅛	.07⅞	.07	.06⅞
August	.07¾	.07⅝	.06⅞	.06⅜
September	.07⅞	.07⅝	.06⅜	.06⅜
October	.07⅞	.07¾	.06⅜	.06⅜
November	.08	.07⅞	.07	.06⅜
December	.08¼	.08	.06⅜	.06⅝
Year	.08⅝	.07⅝	.08⅛	.06⅞

Copra *(F.o.b. Pacific Coast)*

On January 5, 1918, the price was 8⅞c. to 9c.; 1920, January, 11¼c.

(In bags)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05⅜	$0.05¼	$0.04⅜	$0.04⅜
February	.05⅜	.05¼	.04⅜	.04⅜
March	.05¼	.05¼	.04⅜	.04⅝
April	.05¼	.05¼	.04⅝	.04½
May	.05¼	.05¼	.04½	.04¼
June	.05⅛	.05⅛	.04⅛	.04
July	.05	.05	.04¼	.04
August	.05	.04⅞	.04¼	.04⅛
September	.04⅞	.04⅞	.04⅛	.04⅛
October	.04⅞	.04⅝	.04⅛	.04⅜
November	.05	.04⅞	.04⅜	.04¼
December	.05	.05	.04⅜	.04⅜
Year	.05⅜	.04⅜	.04¾	.04

Corn Oil, Crude

March 8, 1915, the price was $7.75 to $7.85; 1920, January, $20.81.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.12	$0.12	$0.10½	$0.10½
February	.12	.12	.11	.10½
March	.10	.10	.11	.11
April	.10	.10	.11	.10⅜
May	.10	.10	.10⅜	.10⅜
June	.10	.10	.10⅜	.10⅛
July	.10	.10	.10⅜	.09½
August	.10	.10	.09½	.09½
September	.10½	.10	.10	.09½
October	.10½	.10½	.10	.10
November	.10½	.10½	.10	.10
December	.10½	.10½	.10	.10
Year	.12	.10	.11	.09½

Corn Oil, Crude

(F.o.b. mill)

(In tank cars)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¾	$0.09¼	$0.08⅞	$0.08⅝
February	.09⅝	.08½	.09⅝	.09¼
March	.08⅝	.08¼	.09½	.08¾
April	.09¼	.09	.08½	.08⅛
May	.09½	.09⅛	.08	.08
June	.09⅛	.08¾	.08	.07⅞
July	.09⅛	.08⅞	.08	.08
August	.08⅝	.08½	.08	.07¾
September	.08¾	.08	.08⅞	.08
October	.08¾	.08⅝	.08⅝	.08
November	.08⅝	.08¼	.08	.08
December	.08⅝	.08⅛	.08	.07⅝
Year	.09¾	.08	.09⅝	.07⅝

Cottonseed Oil, Prime Crude *(F.o.b. Southeast)*

October 18, 1871, the price was 44c. to 46c. per gallon; 1881, 45c. to 50c.; 1891, 30c. to 31c.; 1901, 30c. to 31c.; 1911, 33c.; 1913, 43c. to 43½c. per gallon; 1919, June, 22.50c. per pound.

(Tank cars)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08875	$0.08375	$0.0900	$0.0875
February	.0775	.07625	.0912½	.0900
March	.0850	.07875	.0925	.0887½
April	.0900	.0825	Nominal	
May	.0900	.0875	.0812½	.0787½
June	Nominal		Nominal	
July	Nominal		Nominal	
August	Nominal		Nominal	
September	.0850	.0787½	.0775	.0762½
October	.0837½	.0800	.0750	.0700
November	.0850	.0787½	.0737½	.0725
December	.0850	.0837½	.0737½	.0700
Year	.0900	.07625	.0925	.0700

Cottonseed Oil, Prime Summer Yellow

October 18, 1871, the price was 53c. to 56c. per gallon; in 1881, 56c. to 57½c. per gallon; 1891, 34c. to 35c. per gallon; 1901, 38c. to 40c. per gallon; 1911, 6c. to 6.12c. per pound; 1913, 6.85c. to 6.90c.; 1919, July, 27.50c.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1025	$0.0975	$0.1030	$0.1000
February	.0950	.0900	.1065	.1045
March	.0973	.0925	.1090	.1050
April	.1060	.0955	.1060	.0975
May	.1070	.1030	.0990	.0965
June	.1030	.1010	.0955	.0945
July	.0950	.0930	.0955	.0950
August	.0950	.0900	.0945	.0900
September	.1025	.0850	.0930	.0900
October	.1025	.0940	.0925	.0875
November	.0980	.0920	.0900	.0875
December	.1014	.0980	.0880	.0840
Year	.1070	.0850	.1090	.0840

Flaxseed

Highest and lowest prices of cash flaxseed at Minneapolis monthly in the past two years were as follows:—

Per bushel

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.27½	$2.14	$2.49¼	$2.38½
February	2.28¼	2.23½	2.59¼	2.47½
March	2.37½	2.27⅝	2.58½	2.44¾
April	2.40	2.29¾	2.49½	2.40
May	2.45½	2.40	2.51¾	2.38
June	2.42¾	2.35¼	2.55	2.28
July	2.34½	2.12¾	2.96	2.49½
August	2.15	2.02½	2.97	2.80
September	2.20¾	2.02¼	3.44	2.74
October	2.34	2.16½	3.40½	3.27
November	2.47	2.27¾	3.33¾	3.04
December	2.42¾	2.35¼	3.31	3.12½
Year	2.47	2.02¼	3.44	2.28

Linseed Oil

October 18, 1871, the price was 81c. to 82c.; 1881, 59c. to 60c.; 1891, 40c.; 1901, 65c. to 66c.; 1911, 88c. to 89c.; 1913, 46c.; 1919, July, $2.22.

(Car lots)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1000	$0.0940	$0.1010	$0.1000
February	.1010	.0970	.1020	.1010
March	.1000	.0980	.1020	.1020
April	.1000	.0960	.1010	.1010
May	.0960	.0940	.1040	.1010
June	.1040	.1020	.1070	.1030
July	.1020	.0990	.1280	.1070
August	.0990	.0970	.1310	.1270
September	.0990	.0950	.1630	.1300
October	.1040	.1000	.1630	.1550
November	.1040	.0990	.1530	.1450
December	.1020	.1000	.1500	.1430
Year	.1040	.0940	.1630	.1000

Olive Oil, Edible

January 19, 1918, the price was $3 to $3.25; 1918, November, $7.50.

(In barrels)

Per gallon

	1928. H.	1928. L.	1929. H.	1929. L.
January	$2.50	$2.50	$2.25	$2.25
February	2.50	2.25	2.25	2.25
March	2.25	2.25	2.25	2.25
April	2.25	2.25	2.25	2.25
May	2.25	2.20	2.25	2.25
June	2.20	2.20	2.25	2.25
July	2.20	2.20	2.25	2.25
August	2.20	2.20	2.25	2.00
September	2.25	2.20	2.00	2.00
October	2.25	2.25	2.00	2.00
November	2.25	2.25	2.00	2.00
December	2.25	2.25	2.00	2.00
Year	2.50	2.20	2.25	2.00

Olive Oil, Prime Foots

May 13, 1879, the price was 8½c.; October 18, 1881, 7¼c.; 1891, 5¼c. to 5½c.; 1901, 5c. to 5¼c.; 1911, 7¼c. to 7½c.; 1913, 7¾c. to 8c.; 1918, May, 45c.

(In casks)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09½	$0.09½	$0.11¼	$0.10¼
February	.09⅞	.09½	.11½	.11
March	.10	.09⅞	.10¾	.10¼
April	.10¼	.10	.10½	.10⅝
May	.10½	.10¼	.10	.10
June	.10½	.10	.09¾	.09¾
July	.10	.09¾	.09⅝	.09½
August	.10¼	.09¾	.09½	.09
September	.10¾	.10⅜	.09	.09
October	.10½	.10½	.09	.08⅞
November	.10½	.10¼	.08¾	.08
December	.10⅝	.10¼	.08¼	.08
Year	.10⅞	.09½	.11½	.08

Olive Oil, Denatured

October 18, 1871, the price was $1.22 to $1.25; 1881, $1 to $1.10; 1891, 62c. to 65c.; 1901, 58c. to 62c.; 1911, 85c. to 89c.; 1913, 83c. to 85c.; 1919, January, $3.50.

(In barrels)

Per gallon

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.40	$1.25	$1.35	$1.35
February	1.25	1.25	1.35	1.30
March	1.25	1.25	1.35	1.35
April	1.25	1.25	1.35	1.30
May	1.25	1.25	1.30	1.20
June	1.25	1.25	1.20	1.20
July	1.25	1.20	1.20	1.15
August	1.20	1.20	1.15	1.05
September	1.35	1.35	1.05	1.05
October	1.35	1.35	1.05	1.00
November	1.35	1.35	.98	.92
December	1.35	1.35	.92	.92
Year	1.40	1.20	1.35	.92

Palm Oil, Lagos

October 18, 1871, the price was 8c. to 8¾c.; 1881, 7¼c. to 7½c.; 1891, 6c. to 6¼c. 1901, 5½c. to 5¾c.; 1911, nominal; 1913, 7⅝c. to 7¾c.; 1918, May, 40.

(In casks)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.07⅝	$0.09¼	$0.09⅛
February	.08	.07⅝	.09¼	.09⅛
March	.07⅞	.07⅝	.09½	.09⅛
April	.07⅞	.07⅞	.09¼	.08¾
May	.08	.07⅞	.08¼	.08
June	.07⅞	.07⅝	.07⅝	.07½
July	.08	.08	.08	.07½
August	.08	.07⅞	.08⅛	.07⅝
September	.08½	.08	.07⅝	.07⅝
October	.09¼	.08¼	.07⅝	.07⅝
November	.09⅛	.08⅜	.07½	.07⅝
December	.09¼	.08⅜	.07½	.07¼
Year	.09¼	.07⅝	.09½	.07¼

Palm Kernel Oil

February 26, 1910, the price was 8¾c. to 8½c.; October 18, 1911, 9¼c.; 1913, 10½c. to 10¾c.; October, 1919, 22c.

(In barrels)

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¼	$0.09¼	$0.09¼	$0.09¼
February	.09¼	.09¼	.09¼	.08⅞
March	.09¼	.09¼	.09	.08⅝
April	.09⅛	.09⅛	.08¾	.08½
May	.09¼	.09¼	.08½	.08¼
June	.09¼	.09	.07⅞	.07½
July	.09	.09	.08⅜	.07½
August	.09	.09	.08⅜	.08½
September	.09¼	.09¼	.08½	.08¼
October	.09¼	.09¼	.08¼	.08¼
November	.09¼	.09¼	.08¼	.08⅛
December	.09¼	.09¼	.08	.07⅝
Year	.09¼	.09	.09¼	.07½

THE PROCTER & GAMBLE CO.

Largest Producers and Refiners of

Chemically Pure Glycerine

and all other grades

G. P. A. Radiator Glycerine

("I V O" BRAND)

IVORY BRAND

TRIPLE PRESSED STEARIC ACID

SINGLE and DOUBLE PRESSED

DISTILLED STEARIC ACID

"RUBY OLEINE" BRAND

REPRESSED DISTILLED RED OIL

CINCINNATI
Gwynne Bldg.

PROCTER & GAMBLE PRODUCTS EST. 1837

NEW YORK
205 E. 42nd Street

STOCKS IN ALL LARGE CITIES

Peanut Oil, Crude
(F.o.b. Mills)

November 13, 1900, the price was 8c.; October 18, 1911, 7c. to 7¼c.; 1913, 6½c. to 7½c.; 1919, November, $1.80.

(In buyers' tanks)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09½	$0.09½	$0.10	$0.10
February	.10	.10	.10¼	.10
March	.10	.09¼	.10¼	.10¼
April	.09¼	.09¼	.10¼	.09⅝
May	.09⅝	.09⅝	.09	.08½
June	.09⅝	.09⅝	.08¼	.08¼
July	.09⅝	.09	.08½	.08¼
August	.09¼	.09¼	.08½	.08¼
September	.09¼	.09¼	.08½	.08½
October	.10	.09¼	.08½	.08½
November	.10	.10	.08½	.08½
December	.10	.10	.08½	.07⅝
Year	.10	.09	.10¼	.07⅝

Perilla Oil

August 5, 1918, the price was 19c.; 1919, August, 20c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.13	$0.12¾	$0.18	$0.16
February	.13	.13	.16	.13⅜
March	.13½	.13	.14½	.13½
April	.13	.13	.13½	.13½
May	.13½	.13½	.13½	.13½
June	.13⅛	.13½	.13½	.13½
July	.13½	.13½	.13½	.13½
August	.13½	.13½	.15½	.13½
September	.13½	.13½	.16½	.15½
October	.18	.15½	.17	.16½
November	.18	.18	.17	.17
December	.18	.18	.17	.14
Year	.18	.12¾	.18	.13½

Rapeseed Oil, Blown

May 12, 1902, the price was 67c. to 68c.; October 18, 1901, 66½c. to 67c.; 1911, 72c. to 75c.; 1913, 67c. to 68c.; 1918, September, $2.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$1.01	$1.01	$01.03	$1.03
February	1.01	1.01	1.05	1.03
March	1.01	1.01	1.05	1.05
April	1.01	1.01	1.05	1.04
May	1.03	1.03	1.04	1.04
June	1.03	1.03	1.04	1.04
July	1.03	1.03	1.04	.97
August	1.04	1.04	.97	.97
September	1.04	1.04	1.00	.97
October	1.04	1.03	1.00	1.00
November	1.03	1.03	1.00	1.00
December	1.03	1.03	1.00	1.00
Year	1.04	1.01	1.05	.97

Rapeseed Oil, Refined

October 18, 1871, the price was $1.15 to $1.30; 1881, 85c. to $1; 1891, 67½c. to 70c.; 1901, 68c. to 72c.; 1911, 69c. to 72c.; 1913, 63c. to 64c.; 1918, October, $1.92.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.82	$0.79	$0.83	$0.82
February	.88	.85	.85	.83
March	.85	.85	.86	.85
April	.88	.86	.86	.85
May	.90	.90	.84	.82
June	.90	.88	.84	.83
July	.90	.87	.83	.77
August	.91	.88	.80	.80
September	.87	.83	.80	.78
October	.83	.82	.78	.78
November	.82	.81	.78	.73
December	.84	.81	.73	.73
Year	.91	.79	.86	.73

Sesame Oil, Refined

December 7, 1873, the price was $1.15 to $1.20; October 18, 1881, $1 to $1.10; 1891, 72c. to 75c.; 1901, 67c. to 70c.; 1911, 75c. to 85c.; 1918, November, $4.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.14	$0.13	$0.12½	$0.12½
February	.14	.14	.12½	.12½
March	.14	.14	.12½	.12½
April	.14¼	.14	.12½	.12½
May	.14¼	.14¼	.12½	.12½
June	.14¼	.14¼	.12½	.12½
July	.14¼	.14¼	.12½	.12½
August	.14¼	.14¼	.12½	.12½
September	.14¼	.14¼	.12½	.12½
October	.14¼	.12½	.12½	.12½
November	.12½	.12½	.12½	.12½
December	.12½	.12½	.12½	.12½
Year	.14¼	.12½	.12½	.12½

Soya Bean Oil, Crude

December 18, 1909, the price was 6½c. to 6¾c.; October 18, 1911, 7½c. to 7¾c.; 1913, 6¾c. to 6½c.; 1918, July, 20½c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.12	$0.12	$0.12¼	$0.12¼
February	.12	.12	.12¼	.12¼
March	.12	.12	.12¼	.12¼
April	.12	.12	.12¼	.11⅞
May	.12¼	.12¼	.11⅞	.11⅞
June	.12¼	.12¼	.11⅞	.11⅞
July	.12¼	.12¼	.11⅞	.11
August	.12¼	.12¼	.11	.11
September	.12¼	.12¼	.12	.11
October	.12¼	.12¼	.12½	.12½
November	.12¼	.12¼	.12½	.12½
December	.12¼	.12¼	.12	.12
Year	.12½	.12	.12½	.11

Tallow, Vegetable
(C.i.f. Pacific Coast)

December 9, 1918, the price was 16c.; 1919, June, 22c.

(In mats)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.08	.08¼	$0.08⅛
February	.08	.07¾	.08⅛	.08⅛
March	.07¾	.07¾	.08⅛	.08⅛
April	.07¾	.07¾	.08⅛	.08⅛
May	.07¾	.07¾	.08⅛	.08⅛
June	.07¾	.07¾	.08⅛	.08⅛
July	.07¾	.07¾	.08⅛	.08⅛
August	.07¾	.07¾	.08⅛	.07¾
September	.07¾	.07¾	.07¾	.07¾
October	.07¾	.07¾	.07¾	.07¾
November	.08¾	.07¾	.07¾	.07¾
December	.08⅛	.08⅛	.07¾	.07¾
Year	.09⅜	.07¾	.08⅛	.07¾

Greases, Lard, Stearins and Tallows

Grease, House

November 16, 1901, the price was 5¼c. to 5½c.; October 18, 1911, 5¾c. to 6¼c.; 1913, 5¼c. to 5¾c.; 1919, July, 16½c.

(In tierces)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.07¾	$0.07¾	$0.08¼	$0.08¼
February	.07¾	.07	.08½	.08⅜
March	.06⅞	.06⅝	.08⅛	.08¼
April	.07	.06⅞	.08¼	.07½
May	.07⅛	.07⅛	.07⅛	.06⅞
June	.07⅞	.07⅛	.06¾	.06⅜
July	.07⅛	.07⅛	.06⅝	.06⅜
August	.07⅛	.07¼	.07	.06¾
September	.07⅝	.07⅝	.07½	.07
October	.08⅛	.07⅝	.07⅝	.06⅞
November	.08¼	.08¼	.06¾	.06½
December	.08¼	.08¼	.06½	.06⅛
Year	.08¼	.06⅝	.08½	.06⅛

Lard, City

February 18, 1874, the price was 9⅝c. per pound; October 18, 1881, 12c.; 1891, 6.30c. to 6.50c.; 1901, 9.20c. to 9.30c.; 1911, 8¾c.; 1913, 10½c.; 1919, June, 35½c.

(In tierces)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$12.00	$11.75	$11.75	$11.50
February	11.75	11.00	11.75	11.50
March	11.50	11.25	12.25	11.75
April	12.00	11.50	12.00	12.00
May	12.00	11.75	11.75	11.50
June	11.75	11.50	11.75	11.50
July	12.25	11.75	12.50	11.75
August	12.75	12.25	12.25	12.00
September	13.00	12.75	12.25	11.75
October	12.50	12.00	11.50	11.00
November	11.75	11.50	10.75	10.50
December	11.50	11.25	10.50	10.25
Year	13.00	11.00	12.50	10.25

Lard, Compound

February 8, 1897, the price was 4c. to 4⅜c. per pound; October 18, 1901, 8c. to 8½c.; 1911, 7½c. to 7¾c.; 1913, 8⅜c. to 8⅝c.; 1919, July, 30c.

(In tierces)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$12.75	$12.50	$12.00	$12.00
February	12.25	11.50	12.50	12.00
March	11.50	11.25	12.50	12.50
April	12.50	11.50	12.25	12.00
May	12.50	12.50	11.50	11.50
June	12.50	12.00	11.25	11.25
July	12.25	12.00	11.25	11.25
August	12.00	11.50	11.00	11.00
September	11.75	11.75	11.25	11.25
October	12.00	11.75	11.25	11.00
November	11.75	11.75	10.75	10.75
December	12.00	12.00	10.75	10.75
Year	12.75	11.25	12.50	10.75

Lard, Middle Western

April 29, 1907, the price was 9.10c. per Pound; October 18, 1911, 9.40c.; 1913, 10¾c. to 10⅞c.; 1919, June, 36¼c.

(In tierces)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$12.40	$12.00	$12.15	$11.85
February	12.00	11.35	12.30	12.10
March	11.90	11.55	12.60	12.25
April	12.55	11.90	12.40	12.10
May	12.45	12.00	12.10	11.95
June	12.15	11.75	12.20	11.95
July	12.70	12.30	12.70	12.30
August	12.90	12.05	12.60	12.50
September	13.35	13.00	12.60	11.75
October	12.80	12.15	11.75	11.35
November	12.20	11.95	10.90	10.60
December	11.75	11.55	10.95	10.60
Year	13.35	11.35	12.70	10.60

Lard, Neutral

February 8, 1897, the price was 5c. to 5⅜c. per pound; October 18, 1901, 12¼c. to 12½c.; 1911, 10⅞c.; 1913, 11⅜c. to 12c.; 1919, June, 37½c.

(In tierces)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$14.75	$14.00	$13.50	$13.50
February	13.75	13.00	13.00	13.25
March	12.50	12.50	14.00	13.25
April	13.75	12.50	14.00	14.00
May	13.75	13.25	14.00	13.25
June	13.25	13.25	13.25	13.25
July	13.25	13.25	13.75	13.25
August	14.50	14.50	13.75	13.50
September	14.50	14.50	14.00	13.75
October	15.50	14.00	14.00	13.00
November	14.00	13.50	13.00	12.75
December	13.50	13.50	12.75	12.25
Year	15.50	12.50	14.00	12.25

Stearin, Oleo

January 4, 1891, the price was 6¼c. to 6½c.; October 18, 1901, 11½c. to 11¾c.; 1911, 10¼c.; 1913, 8½c. to 8¾c.; 1919, July, 41c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10⅜	$0.10	$0.11¼	$0.10½
February	.09⅞	.09⅜	.12⅛	.11⅜
March	.11	.09⅜	.11½	.11
April	.11½	.11¼	.11¼	.10¼
May	.11⅜	.10¼	.10	.09⅜
June	.10⅜	.09½	.09⅞	.09¼
July	.10⅜	.09⅜	.10¼	.09⅜
August	.11	.10¼	.11	.10⅜
September	.12½	.11½	.11	.10¼
October	.12⅜	.11	.11½	.10¼
November	.10⅜	.10⅜	.10⅛	.09⅜
December	.11¼	.10⅜	.09⅜	.09½
Year	.12½	.09⅜	.12¼	.09½

Tallow, Special, Loose

August 26, 1911, the price was 7c. to 7¼c.; October 18, 1911, 7¼c. to 7⅜c.; 1913, 6⅞c.; 1919, July, 21c.

(In car lots)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08⅞	$0.08⅝	$0.08⅞	$0.08⅝
February	.08⅝	.08⅝	.09¼	.09
March	.08½	.08½	.09	.08½
April	.08⅝	.08¼	.08¼	.08
May	.08¼	.08	.07½	.07¼
June	.08	.08	.07¼	.06⅞
July	.08	.08	.07¼	.06⅞
August	.08	.08	.07⅝	.07⅜
September	.08⅝	.08¼	.08⅜	.07⅝
October	.09¼	.08⅝	.08¼	.08
November	.09¼	.09¼	.07⅞	.07⅝
December	.09¼	.08⅞	.07⅝	.07¾
Year	.09¼	.08	.09¼	.08⅛

Animal Oils

Degras, American

November 28, 1903, the price was 2½c. to 2¾c.; October 18, 1911, 2¾c.; 1913, 3c.; 1918, October, 20½c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04½	$0.04½	$0.04½	$0.04½
February	.04½	.04½	.04½	.04½
March	.04½	.04½	.04½	.04¾
April	.04½	.04½	.04¾	.04¾
May	.04½	.04½	.04¾	.04¾
June	.04½	.04½	.04¾	.04¾
July	.04½	.04½	.04¾	.04¾
August	.04½	.04½	.04¾	.04¾
September	.04½	.04½	.04¾	.04¾
October	.04½	.04½	.04¾	.04¾
November	.04½	.04½	.04¾	.04¾
December	.04½	.04½	.04¾	.04¾
Year	.04½	.04½	.04½	.04¾

Degras, English

January 20, 1875, the price was 7½c. to 8c.; October 18, 1881, 9½c. to 10c.; 1891, 3¼c. to 3½c.; 1901, 3½c. to 3⅝c.; 1911, 2½c.; 1913, 3⅛c. to 3¼c.; 1918, October, 28c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05⅜	$0.05⅜	$0.05	$0.05
February	.05⅜	.05⅜	.05	.05
March	.05⅜	.05⅜	.05	.05
April	.05⅜	.05⅜	.05	.05
May	.05⅜	.05⅜	.05	.05
June	.05⅜	.05⅜	.05	.05
July	.05⅜	.05⅜	.05	.05
August	.05⅜	.05⅜	.05	.05
September	.05⅜	.05	.05	.05
October	.05	.05	.05	.04½
November	.05	.05	.04½	.04½
December	.05	.05	.04½	.04½
Year	.05⅜	.05	.05	.04½

Lard Oil, Extra No. 1

February 15, 1876, the price was 95c. to $1; October 18, 1881, 85c. to 90c.; 1891, 47c. to 50c.; 1901, 52c. to 54c.; 1911, 60c. to 64c.; 1913, 58c. to 59c.; 1918, October, $1.70.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$12.50	$12.25	$12.75	$12.75
February	12.50	11.75	13.25	12.75
March	11.75	11.50	13.25	13.25
April	12.00	12.00	13.25	13.00
May	12.00	12.00	13.25	13.00
June	12.25	12.00	12.25	12.00
July	12.25	12.25	12.25	12.00
August	12.25	12.25	12.00	12.00
September	12.75	12.25	12.00	12.00
October	13.00	12.75	12.00	12.00
November	13.25	13.00	12.00	12.00
December	13.00	12.75	12.00	12.00
Year	13.25	11.50	13.25	12.00

Lard Oil, No. 2

October 18, 1871, the price was 65c. to 68c.; 1881, 55c. to 62½c.; 1891, 35c. to 37c.; 1901, 41c. to 42c.; 1911, 56c. to 60c.; 1913, 52c. to 53c.; 1918, September, $1.50.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$11.25	$11.00	$12.25	$12.25
February	11.25	10.75	13.00	12.25
March	10.75	10.75	12.75	12.75
April	11.25	11.00	12.75	12.50
May	11.25	11.00	12.25	12.00
June	11.25	11.00	11.75	11.25
July	11.25	11.25	11.50	11.25
August	11.25	11.00	11.25	11.25
September	11.25	11.25	11.50	11.50
October	12.25	11.75	11.50	11.50
November	12.50	12.00	11.50	11.50
December	12.50	12.00	11.50	11.50
Year	12.50	10.75	13.00	11.25

Neatsfoot Oil, Pure

October 18, 1871, the price was $1 to $1.10; 1881, 80c. to 90c.; 1891, 60c. to 70c.; 1901, 52c. to 53c.; 1911, 75c. to 80c.; 1913, 64c. to 65c.; 1918, October, $2.50.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$16.50	$16.25	$15.25	$15.00
February	16.00	15.50	15.25	15.25
March	15.75	15.50	15.00	15.00
April	15.75	15.75	15.00	14.75
May	15.75	15.75	14.75	14.75
June	15.75	15.50	14.75	13.75
July	15.25	15.25	13.75	13.75
August	15.25	15.25	14.50	14.00
September	15.50	15.25	14.50	14.50
October	15.25	15.25	14.50	14.50
November	15.25	15.25	14.50	14.50
December	15.25	15.25	14.50	14.50
Year	16.50	15.25	15.25	13.75

Oleo Oil, No. 1

April 24, 1909, the price was 9c. to 14½c.; October 18, 1911, 9¼c. to 11½c.; 1913, 9c. to 12½c.; 1919, June, 35c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$17.50	$16.75	$11.50	$11.25
February	16.50	15.00	11.50	11.50
March	14.50	13.50	11.50	11.50
April	13.75	14.25	11.50	11.25
May	15.00	13.25	11.25	11.00
June	14.50	13.75	11.00	10.75
July	13.75	13.25	10.75	10.75
August	13.00	13.00	11.00	11.00
September	13.50	13.25	11.50	11.00
October	13.25	12.75	11.50	11.25
November	12.75	12.00	11.25	11.25
December	11.75	11.25	11.87½	11.25
Year	17.50	11.25	11.87½	10.75

Oleo Oil, No. 2

July 29, 1918, the price was 26c.; 1919, June, 33c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$16.25	$14.50	$11.00	$11.00
February	14.25	13.25	11.00	11.00
March	13.00	12.50	11.00	11.00
April	14.00	13.25	11.00	10.75
May	14.00	13.50	10.75	10.50
June	13.50	12.75	10.50	9.50
July	12.50	12.25	9.75	9.50
August	11.75	11.75	10.00	9.75
September	12.50	12.25	10.50	10.00
October	12.00	11.75	10.25	10.25
November	11.25	10.75	10.25	10.25
December	11.00	10.25	10.67½	10.25
Year	16.25	10.25	11.00	9.50

Tallow Oil, Acidless

October 18, 1871, the price was 77½c. to 80c.; 1881, 75c. to 85c.; 1891, 45c. to 48c.; 1901, 57c.; 1911, 63c. to 65c.; 1913, 62c. to 63c.; 1919, July, $1.90.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$11.75	$11.75	$12.00	$12.00
February	11.75	11.50	12.00	11.75
March	11.50	11.50	12.00	11.75
April	11.50	11.50	11.75	11.25
May	11.50	11.50	11.25	11.25
June	11.50	11.50	11.25	10.75
July	11.50	11.50	10.75	10.75
August	11.50	11.50	10.75	10.75
September	12.00	11.50	11.00	10.75
October	12.00	12.00	11.00	11.00
November	12.25	12.25	11.00	11.00
December	12.25	12.25	11.25	11.00
Year	12.25	11.50	12.00	10.75

Fatty Acids

Red Oil, Distilled

May 27, 1911, the price was 6½c. to 7½c.; October 18, 1913, 6c. to 6¼c.; 1919, June, 20½c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09⅝	$0.09⅛	$0.10⅝	$0.09⅞
February	.09⅝	.09⅝	.11⅛	.10⅝
March	.09⅝	.09⅝	.11⅛	.11⅛
April	.09⅝	.09⅝	.11⅛	.11⅛
May	.09⅝	.09⅝	.11⅛	.10⅝
June	.09⅝	.09⅝	.10⅝	.10⅝
July	.09⅝	.09⅝	.10⅝	.10⅝
August	.09⅝	.09⅝	.10⅝	.10⅝
September	.09⅝	.09⅝	.10⅝	.10⅝
October	.09⅝	.09⅝	.10⅝	.10⅝
November	.09⅝	.09⅝	.10⅝	.10⅝
December	.09⅞	.09⅝	.10⅝	.10⅝
Year	.09⅞	.09⅝	.11⅛	.10⅝

Red Oil, Saponified

October 18, 1871, the price was 55c. to 57c.; 1881, 60c.; 1891, 5c. to 5¼c.; 1901, 6¼c. to 6½c.; 1911, 7c. to 7½c.; 1913, 6½c. to 7c.; 1919, July, 20½c.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10	$0.10	$0.10⅝	$0.10⅝
February	.10	.10	.11⅛	.10⅝
March	.10	.10	.11⅛	.11⅛
April	.10	.10	.11⅛	.11⅛
May	.10	.10	.11⅛	.10⅝
June	.10	.10	.10⅝	.10⅝
July	.10	.10	.10⅝	.10⅝
August	.10	.10	.10⅝	.10⅝
September	.10	.10	.10⅝	.10⅝
October	.10	.10	.10⅝	.10⅝
November	.10	.10	.10⅝	.10⅝
December	.10⅛	.10	.10⅝	.10⅝
Year	.10⅛	.10	.11⅛	.10⅝

Stearic Acid, Double Pressed

May 16, 1908, the price was 10c. to 10¼c.; October 18, 1911, 10¼c. to 10½c.; 1919, July, 31½c.

(In bags)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.11⅜	$0.11⅜	$0.18	$0.18
February	.11⅜	.11⅜	.18	.18
March	.11⅜	.11⅜	.16½	.16½
April	.11⅜	.11⅜	.16½	.16½
May	.11⅜	.11⅜	.16	.15¼
June	.11⅜	.11⅜	.15¼	.15¼
July	.11⅜	.11⅜	.15¼	.15¼
August	.12¼	.11⅜	.15½	.15¼
September	.14	.12¼	.15½	.15½
October	.18	.14½	.15¾	.15¾
November	.18	.18	.15¾	.15¾
December	.18	.18	.15¾	.15¾
Year	.18	.11¾	.18	.15¼

Stearic Acid, Triple Pressed

June 12, 1915, the price was 13c. to 13½c.; 1919, July, 34c.

(In bags)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.13¾	$0.13¾	$0.20	$0.20
February	.13¾	.13¾	.20	.20
March	.13¾	.13¾	.18½	.18
April	.13¾	.13¾	.18	.18
May	.13¾	.13¾	.17¾	.17¾
June	.13¾	.13¾	.17¾	.17¾
July	.13¾	.13¾	.17¾	.17¾
August	.15	.13¾	.18	.17¾
September	.16½	.15	.18	.18
October	.20	.17	.18¼	.18¼
November	.20	.20	.18¼	.18¼
December	.20	.20	.18¼	.18¼
Year	.20	.13¾	.20	.17¾

Fish Oils

Cod Oil, Newfoundland

October 18, 1871, the price was 67½c. to 70c.; 1881, 42½c. to 47c.; 1891, 42c. to 43c.; 1901, 34c. to 35c.; 1911, 34c. to 57c.; 1913, 40c. to 42c.; 1918, October, $1.60.

(In barrels)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.63	$0.63	$0.65	$0.65
February	.63	.63	.65	.65
March	.67	.67	.65	.64
April	.68	.67	.63	.63
May	.68	.68	.63	.63
June	.68	.68	.63	.63
July	.68	.68	.63	.62
August	.68	.68	.62	.62
September	.68	.66	.62	.61
October	.66	.66	.59	.59
November	.66	.66	.59	.59
December	.65	.65	.59	.59
Year	.68	.63	.65	.59

Herring Oil
(F.o.b. Pacific Coast)

October 31, 1888, the price was 35c.; October 18, 1901, nominal; 1911, 50c.; 1913, nominal; 1918, October, $1.20.

(In sellers' tanks)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.40	$0.40	$0.40	$0.40
February	.40	.40	.40	.40
March	.40	.40	.40	.40
April	.40	.40	.40	.40
May	.40	.40	.40	.40
June	.40	.40	.40	.40
July	.40	.40	.40	.40
August	.40	.40	.40	.40
September	.40	.40	.40	.40
October	.40	.40	Nominal	
November	.40	.40	Nominal	
December	.40	.40	Nominal	
Year	.40	.40	.40	.40

Menhaden Oil, Southern, Crude
(F.o.b. Baltimore)

December 1, 1886, the price was 18c. to 19c.; October 18, 1901, 25c.; 11, 35c.; 1913, 35c.; 1918, September, $1.27.

(In tankcars)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.40	$0.40	Nominal	
February	.40	.40	Nominal	
March	.40	.40	Nominal	
April	.40	.40	Nominal	
May	.42½	.40	Nominal	
June	.45	.41	Nominal	
July	.42½	.41	$0.45	$0.42
August	.42½	.40	.47½	.45
September	.41	.40	.50	.45
October	.47½	.42½	.50	.48
November	.50	.47½	.48	.45
December	Nominal		.45	.45
Year	.50	.40	.50	.42

Menhaden Oil, Light Pressed

October 18, 1871, the price was 41c.; 1881, nominal; 1891, nominal; 1901, 34c. to 35c.; 1911, 50c. to 54c.; 1913, 42c. to 44c.; 1918, November, $1.50.

(In barrels)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.60	$0.60	$0.69	$0.62
February	.60	.60	.71	.69
March	.60	.60	.71	.71
April	.60	.60	.71	.71
May	.62	.60	.71	.71
June	.62	.62	.71	.71
July	.62	.60	.71	.67
August	.60	.60	.67	.67
September	.60	.60	.67	.67
October	.60	.60	.67	.67
November	.62	.60	.67	.67
December	.62	.62	.67	.67
Year	.62	.60	.71	.62

Menhaden Oil, Yellow Bleached

January 3, 1910, the price was 33c. to 34c. October 18, 1911, 48c. to 51c.; 1913, 40c. to 42c.; 1918, September, $1.47.

(In barrels)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.63	$0.63	$0.71	$0.64
February	.63	.63	.73	.71
March	.63	.63	.73	.73
April	.63	.63	.73	.73
May	.65	.63	.73	.73
June	.65	.65	.73	.73
July	.65	.62	.73	.69
August	.62	.62	.69	.69
September	.62	.62	.69	.69
October	.62	.62	.69	.69
November	.64	.62	.69	.69
December	.64	.64	.69	.69
Year	.65	.62	.73	.64

Salmon Oil
(F.o.b. Pacific Coast)

July 29, 1918, the price was 90c.; 1918, December, $1.35.

(In sellers' tanks)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.44	$0.44	$0.44	$0.44
February	.44	.44	.44	.44
March	.44	.44	.44	.44
April	.44	.44	.44	.44
May	.44	.44	.44	.44
June	.44	.44	.44	.44
July	.44	.44	.44	.44
August	.44	.44	.44	.44
September	.44	.44	.44	.44
October	.44	.44	.44	.44
November	.44	.44	.44	.44
December	.44	.44	.44	.44
Year	.44	.44	.44	.44

Sardine Oil
(F.o.b. Pacific Coast)

July 29, 1918, the price was $1.08 to $1.10; 1918, January, $1.23.

(In sellers' tanks)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.45	$0.45
February	.40	.40	.45	.45
March	.40	.40	.45	.45
April	.40	.40	.45	.45
May	.40	.40	.45	.45
June	.40	.40	.45	.45
July	.40	.40	.45	.45
August	.40	.40	.45	.45
September	.40	.40	.45	.45
October	.40	.40	.48	.48
November	.45	.45	.48	.48
December	.45	.45	.48	.48
Year	.45	.40	.48	.45

Sperm Oil, Bleached

October 18, 1871, the price was $1.40 to $1.42½; 1881, $1.10 to $1.12; 1891, 77c. to 80c.; 1901, 66c. to 68c.; 1911, 74c. to 76c.; 1913, 72c. to 73c.; 1918, April, $2.26.

(In barrels)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.84	$0.84	$0.84	$0.84
February	.84	.84	.84	.84
March	.84	.84	.84	.84
April	.84	.84	.84	.84
May	.84	.84	.84	.84
June	.84	.84	.84	.84
July	.84	.84	.84	.84
August	.84	.84	.84	.84
September	.84	.84	.84	.84
October	.84	.84	.84	.84
November	.84	.84	.84	.84
December	.84	.84	.84	.84
Year	.84	.84	.84	.84

Whale Oil, Crude No. 1
(F.o.b. Pacific Coast)

October 18, 1871, the price was 56c. to 57c.; 1881, nominal; 1891, nominal; 1901, nominal; 1911, nominal; 1913, nominal; 1918, August, $1.35.

(In sellers' tanks)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07¼	$0.07¼	$0.07¼	$0.07¼
February	.07¼	.07¼	.07¼	.07¼
March	.07¼	.07¼	.07¼	.07¼
April	.07¼	.07¼	.07	.07
May	.07¼	.07¼	.07	.07
June	.07¼	.07¼	.07	.07
July	.07¼	.07¼	.07	.07
August	.07¼	.07¼	.07	.07
September	.07¼	.07¼	.07	.07
October	.07¼	.07¼	.07	.07
November	.07¼	.07¼	.07	.07
December	.07¼	.07¼	.07	.07
Year	.07¼	.07¼	.07¼	.07

Whale Oil, Bleached Winter

October 18, 1871, the price was 65c. to 68c.; 1881, 54c.; 1891, 58c. to 59c.; 1901, 46c. to 48c.; 1911, 52c. to 54c.; 1913, 50c. to 51c.; 1918, January, $1.50.

(In barrels)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.80	$0.80	$0.80	$0.80
February	.80	.80	.80	.80
March	.80	.80	.80	.80
April	.80	.80	.80	.80
May	.80	.80	.80	.80
June	.80	.80	.80	.80
July	.80	.80	.80	.80
August	.80	.80	.80	.80
September	.80	.80	.80	.80
October	.80	.80	.80	.80
November	.80	.80	.80	.80
December	.80	.80	.80	.80
Year	.80	.80	.80	.80

Whale Oil, Natural Winter

October 18, 1871, the price was 63c.; 1881, 50c. to 51c.; 1891, 56c.; 1901, 44c. to 46c.; 1911, 50c. to 52c.; 1913, 48c. to 49c.; 1918, September, $1.50.

(In barrels)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.78	$0.78	$0.78	$0.78
February	.78	.78	.78	.78
March	.78	.78	.78	.78
April	.78	.78	.78	.78
May	.78	.78	.78	.78
June	.78	.78	.78	.78
July	.78	.78	.78	.78
August	.78	.78	.78	.78
September	.78	.78	.78	.78
October	.78	.78	.78	.78
November	.78	.78	.78	.78
December	.78	.78	.78	.78
Year	.78	.78	.78	.78

Botanical Prices

(Continued from page 77)

Canary, Argentine

June 12, 1871, the price of Spanish seed was 3½c.; October 18, 1881, 4c. to 4¼c.; 1891, 2½c. to 2⅝c.; 1901, Smyrna, 2⅜c. to 2½c.; 1911, Smyrna, 3⅛c. to 3⅜c.; 1913, Smyrna, 5½c. to 5⅝c.; 1918, September, Spanish, 25c.; 1920, nominal; 1921, nominal. On May 28, 1906, the price of South American seed was 4c.; October 18, 1911, 3⅛c. to 3⅜c.; 1913, 5½c. to 5⅝c.; 1918, September, 25c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.04¼	$0.04¼	$0.04¾	$0.04¾
February	.04¼	.04¼	.05¼	.05¼
March	.04½	.04¼	.06	.05¾
April	.04¾	.04⅝	.06⅜	.06⅜
May	.04¾	.04½	.06⅜	.06⅜
June	.04⅜	.04¾	.06½	.06½
July	.04¾	.04¾	.06½	.06½
August	.04¾	.04¾	.06½	.06½
September	.04¾	.04½	.07	.06¾
October	.04¾	.04¾	*.07	.07
November	.04¾	.04¾	*.07¼	.07
December	.04¾	.04¾	.07¼	.07¼
Year	.04¾	.04¼	.07¼	.04¾

* Nominal.

Caraway, Dutch

October 18, 1871, the price was 11½c.; 1881, Dutch, 6c. to 7c.; 1891, 5c. to 5¼c.; 1901, Dutch, 5½c. to 6c.; 1911, Dutch, 6½c. to 7c.; 1913, 7c. to 7½c.; 1918, November, 69c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.09½	$0.09½	$0.09¾	$0.09⅝
February	.09½	.09¾	.09⅝	.09⅝
March	.09½	.09⅝	.09¾	.09⅝
April	.09½	.09½	.10⅝	.10½
May	.09½	.09½	.10¾	.10½
June	.09½	.09½	.10½	.10½
July	.09½	.09	.10½	.10½
August	.09½	.09	.10½	.10¾
September	.09¼	.09	.10¼	.09¾
October	.09¾	.09¼	.10½	.10
November	.10	.09¾	.10¼	.10¼
December	.10	.09¾	.10¾	.10
Year	.10	.09	.10¾	.09⅝

Nineteen Years' Prices

	Per pound	
	H.	L.
1929	$0.10⅝	$0.09¾
1928	.10	.09
1927	.10¼	.08
1926	.11	.06
1925	.10¼	.06½
1924	.24	.09½
1923	.28½	.10½
1922	.13	.07½
1921	.09	.06¾
1920	.12	.09
1919	.52	.52
1918	.69	.52
1917	.65	.52
1916	.51	.10¾
1915	.13½	.08½
1914	.15	.07
1913	.07¼	.05¾
1912	.08	.05⅝
1911	.06½	.05

Cardamom, Bleached

October 18, 1871, the price was $2.80 to $2.85; 1881, $2 to $2.25; 1891, 60c. to 80c.; 1901, 55c. to 85c.; 1911, 62c. to $1.25; 1913, $1.25 to $1.75; 1919, December, $2.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$1.40	$1.40	$1.20	$1.20
February	1.40	1.30	1.30	1.20
March	1.30	1.30	1.30	1.30
April	1.30	1.30	1.30	1.30
May	1.30	1.30	1.30	1.30
June	1.30	1.20	1.30	1.30
July	1.20	1.20	1.30	1.30
August	1.20	1.20	1.30	1.30
September	1.20	1.20	1.30	1.30
October	1.20	1.20	1.30	1.30
November	1.20	1.20	1.30	1.30
December	1.20	1.20	1.30	1.30
Year	1.40	1.20	1.30	1.20

Celery

October 7, 1879, the price was 15c. to 16c.; October 18, 1881, 12½c. to 14c.; 1891, 17c.; 1901, 7½c. to 8c.; 1911, 20c. to 23c.; 1913, 12c. to 13c.; 1918, October, 70c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15¼	$0.15	$0.17¼	$0.17
February	.18½	.16¼	.18½	.17¼
March	.21	.19¼	.19	.18¼
April	.20¾	.19	.18¼	.17¾
May	.19¼	.18¾	.17¾	.17¼
June	.19	.18½	.17¾	.17½
July	.19	.18½	.18	.17¾
August	.20	.18½	.18	.17¼
September	.20	.19½	.17¾	.17½
October	.19¼	.19	.18¼	.17¾
November	.19	.19	.18¼	.18
December	.19	.17¼	.18	.17½
Year	.21	.15	.19	.17

Eighteen Years' Prices

	Per pound	
	H.	L.
1929	$0.19	$0.17
1928	.21	.15
1927	.20½	.16
1926	.23½	.15½
1925	.35½	.24
1924	.33	.24½
1923	.30	.19¼
1922	.23½	.13
1921	.15	.12
1920	.32	.15
1919	.55	.32
1918	.70	.26½
1917	.30	.18
1916	.30	.18¾
1915	.35	.14
1914	.40	.14
1913	.45	.12
1912	.30	.15

Coriander, Bleached

October 18, 1871, the price was 9c.; 1881, 5c. to 6c.; 1891, 3¼c. to 4c.; 1901, 3c. to 3½c.; 1911, 3¾c. to 4c.; 1913, 6¼c. to 6½c.; 1917, June, 25½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.17	$0.16	$0.10½	$0.10½
February	.18	.18	.10½	.10
March	.18	.18	.10	.10
April	.18	.18	.10	.08½
May	.18	.17½	.08½	.08
June	.17½	.17	.08	.08
July	.17	.15	.08	.08
August	.15	.11½	.08	.07½
September	.11½	.11½	.07½	.07½
October	.11½	.11	.07½	.07½
November	.11	.11	.07½	.07½
December	.11	.10½	.07½	.07½
Year	.18	.10½	.10½	.07½

Fenugreek

November 22, 1871, the price for powdered seed was 6c. to 7c.; October 18, 1881, whole seed, 3½c. to 4c.; 1891, 2½c. to 2⅝c.; 1901, 1⅞c. to 2c.; 1911, 2½c. to 2⅝c.; 1913, 3c. to 3½c.; 1918, May, 15c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.05	$0.05	$0.04½	$0.04½
February	.05	.05	.04⅝	.04½
March	.05	.05	.04⅝	.04⅝
April	.05	.05	.06	.04⅝
May	.05	.04⅝	.06¼	.06¼
June	.04⅝	.04½	.05⅝	.05½
July	.04½	.04½	.05½	.05½
August	.04½	.04½	.05½	.05½
September	.04½	.04½	.05½	.05½
October	.04½	.04½	.05½	.05½
November	.04½	.04¼	.05½	.05½
December	.04½	.04½	.06½	.05¼
Year	.05	.04½	.06¼	.04½

Mustard, California, Brown

October 18, 1871, the price was 13c. to 15c.; 1881, 6c.; 1891, 4¾c. to 5c.; 1901, 4½c. to 5c.; 1911, 6¼c. to 6½c.; 1913, 4¾c. to 5c.; 1918, November, 31c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07¼	$0.07¼	$0.11¼	$0.11¼
February	.07¼	.07¼	.11¼	.11¼
March	.07¼	.07¼	.11¼	.11
April	.07½	.07¼	.11	.11
May	.10	.08	.11	.11
June	.10	.10	.11	.10½
July	.10¼	.10	.10½	.10½
August	.10¾	.08¾	.10½	.10¼
September	.10¾	.10	.10¼	.10
October	.11⅛	.10½	.10½	.10½
November	.11½	.11⅛	.11¼	.10¾
December	.11½	.11½	.11	.11
Year	.11½	.07¼	.11¼	.10

Worm, American

April 2, 1878, the price of powder was 12c. to 15c.; October 18, 1881, whole, 5c. to 6c.; 1901, 9½c. to 10c.; 1911, 6c. to 7c.; 1913, 10c. to 11c.; 1920, August, 30c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.15	$0.15	$0.11½	$0.11½
February	.15	.14	.11½	.11½
March	.14	.14	.11½	.11½
April	.14	.14	.09½	.09½
May	.14	.14	.09½	.09½
June	.14	.14	.09½	.09½
July	.14	.14	.09½	.09½
August	.14	.14	.09½	.09
September	.14	.14	.09	.09
October	.14	.11½	.09	.09
November	.11½	.11½	.09	.09
December	.11½	.11½	.09	.09
Year	.15	.11½	.11½	.09

Spices

Clove, Zanzibar

May 28, 1875, the price for ground was 41c. to 50c.; October 18, 1881, 29c. to 30c.; 1891, 8c. to 8¼c.; 1901, 8c. to 8¼c.; 1911, 16½c. to 17c.; 1913, 16½c. to 16¾c.; 1919, December, 55c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.19	$0.18	$0.37	$0.36
February	.19	.18¼	.37	.37
March	.19	.18	.38	.37
April	.19	.19	.38	.37
May	.23½	.19½	.37	.36½
June	.25½	.23	.36½	.35
July	.28	.28	.34½	.34
August	.28	.26½	.33½	.32½
September	.26¾	.26¼	.32	.28
October	.32	.30½	.28	.28
November	.36½	.32	.28½	.28
December	.36½	.36	.28½	.23½
Year	.36½	.18	.38	.23½

Twenty-nine Years' Prices

	Per pound	
	H.	L.
1929	$0.38	$0.23½
1928	.36½	.18
1927	.23	.17¾
1926	.26¾	.22½
1925	.30	.24
1924	.34	.26½
1923	.36	.23
1922	.37	.27
1921	.37½	.16
1920	.50	.24
1919	.55	.19
1918	.49	.43
1917	.55	.19½
1916	.20	.16½
1915	.21	.15¼
1914	.22	.14½
1913	.21½	.15
1912	.20½	.10¾
1911	.19	.12
1910	.15½	.10
1909	.11½	.09½
1908	.12	.10
1907	.18½	.11
1906	.15	.13
1905	.14½	.08½
1904	.19	.13
1903	.10½	.07½
1902	.09	.08
1901	.09½	.07½

Nutmegs, 110s

January 12, 1881, the price of prime to ordinary was 27½c. to 30c.; October 18, 1881, 65c. to 84c.; 1891, 105s to 110s, 90c. to 61c.; 1901, 22½c. to 23c.; 1911, 14¾c. to 15c.; 1913, 14c. to 14¼c.; 1918, August, 39c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.32½	$0.30	$0.31½	$0.30¼
February	.37	.35	.31	.30
March*	.37	.37	.31	.31
April	.37	.37	.30	.30
May	.37	.36	.30	.30
June	.36	.35	.29	.29
July	.35	.34	.29	.29
August	.34	.34	.29	.28
September	.34	.34	.28	.28
October	.34	.33	.28	.28
November	.33	.31½	.28	.27
December	.31½	.31½	.27	.27
Year	.37	.30	.31½	.27

Pepper, Singapore, Black

April 28, 1875, the price of ground was 18c. to 25c.; October 18, 1881, whole, 16½c. to 17c.; 1891, 8½c. to 8¾c.; 1901, 12⅝c. to 12¾c.; 1911, 11⅝c. to 11½c.; 1913, 11⅝c. to 12c.; 1918, May, 28½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.37	$0.36½	$0.37	$0.37
February	.38½	.37	.37	.35
March	.40½	.39	.36	.36
April	.41	.40	.36	.36
May	.41½	.41	.36	.36
June	.41	.38	.36	.36
July	.38	.34½	.36	.36
August	.32½	.31½	.36	.35½
September	.36	.34	.35½	.35½
October	.38	.38	No stocks	
November	.37	.37	No stocks	
December	.37	.37	No stocks	
Year	.41½	.31½	.37	.35

Pepper, Lampong

April 28, 1875, the price on ground was 18c. to 25c.; October 18, 1881, whole, 16½c. to 17c.; 1891, 8½c. to 8¾c.; 1901, 12⅝c. to 12¾c.; 1911, 11c. to 11¼c.; 1913, 10⅝c. to 11c.; 1918, May, 28½c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.36½	$0.36½	$0.36½	$0.36
February	.38½	.37¼	.36	.24¾
March	.40½	.39	.35½	.35
April	.41	.40	.35¼	.34½
May	.41½	.41	.35½	.35¼
June	.41	.37	.35¼	.35
July	.37	.34½	.36	.35½
August	.32½	.31	.36	.35½
September	.36	.34	.35	.33½
October	.38	.37	.33	.31
November	.36	.35½	.31	.31
December	.36	.35½	.31	.28
Year	.41½	.31	.36½	.28

Pepper, Singapore, White

April 28, 1875, the price on powder was 30c. to 36c.; October 18, 1881, whole, 22½c. to 23½c.; 1891, 14¾c. to 15c.; 1901, 19½c. to 19⅝c.; 1911, 16¾c. to 17c.; 1913, 20c. to 20½c.; 1919, August, 34¾c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.49½	$0.48½	$0.52½	$0.50
February	.55	.52	.54	.52
March	.59	.55	.57	.55
April	.60	.58	.57	.54
May	.62	.60	.60	.55
June	.62	.59	.62	.62
July	.58½	.57	.62	.62
August	.55	.55	.62	.62
September	.57	.55	.62	.57½
October	.56	.55	.54½	.54
November	.54	.50	.49½	.48
December	.50	.48	.48	.39
Year	.62	.48	.62	.39

Pepper, Chillies, Japan, No. 1

April 28, 1875, the price of ground African was 30c. to 32c.; October 18, 1881, whole, Bombay, 13c. to 14c.; 1891, Bombay, 8½c. to 9c.; 1901, Japan, 10⅝c. to 11c.; 1911, 12c. to 12¼c.; 1913, 8¼c. to 8⅝c.; 1921, October, 42c.

	Per pound			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.27½	$0.25	$0.19	$0.18
February	.24	.24	.18	.16
March	.23¼	.22	.16	.16
April	.24	.23¼	.17	.16
May	.24	.24	.17	.17
June	.24	.24	.17	.17
July	.24	.24	.17	.17
August	.24	.24	.17	.16
September	.24	.24	.16¼	.16
October	.24	.23	.16¼	.16¼
November	.23	.23	.16¼	.16¼
December	.22	.21	.16¼	.16
Year	.27½	.21	.19	.16

Naval Stores Exports

Naval stores exports in 1929 showed a gain in value of approximately 19 per cent over those in 1928, the comparative values being $25,033,894 and $29,678,471. More than 218,000 barrels of gum rosin, 44,777 barrels of wood rosin, and 3,793,729 gallons of gum spirits of turpentine were exported in excess of the previous year. Wood turpentine exports, however, declined almost 162,000 gallons.

Shipments of gum and wood rosins included the following that were higher in each instance than those in 1928:—

	Barrels.	Value.
United Kingdom	291,058	$4,158,542
Germany	286,756	3,985,789
Argentina	105,822	1,455,900
Japan	98,553	1,402,732
Netherlands	77,084	1,069,915
Netherland East Indies	57,645	846,477
Italy	43,648	594,597
Soviet Russia in Europe	112,436	1,646,441
Sweden	30,445	446,532
Belgium	22,231	318,274

Destinations of increased shipments of gum spirit of turpentine in 1929 were as follows:—

	Gallons.	Value.
United Kingdom	6,892,591	$3,395,940
Germany	2,533,653	1,267,372
Netherlands	2,028,475	1,010,494
Belgium	1,608,743	788,948
Australia	588,664	391,980
Argentina	451,578	359,177
Brazil	299,929	177,360

Business Faces Hard Work

(Continued from page 3)

expert advice which it is planned to give him with respect to the economics of his occupation. It is by no means certain, however, that the suggested adjustment of supply and demand will be fully satisfactory if, as seems likely, the pressure will be applied more to the reduction of output than to the increasing of sales.

Naturally, because of the general industrial consumption of its products, business in chemicals, oils, drugs, and related materials passed through much of the same experience in 1929 as had been the lot of industry and commerce at large. There was over-production here and there. Prices were cut because of this and in other instances, because of competition which brought new products into certain consuming fields. The hesitancy and uncertainty caused by the prolonged and incompleted tariff deliberations were quite noticeable in various lines of the chemical, oil, and drug group. The stock market clash added the factor of slow pay. And all these factors were emphasized by a feeling that the operations of the plan of farm relief would set up a new relation of supply and demand which might result in unexpected changes in the farmer's buying power. The slowing up of building construction was felt in many of the lines of trade; although the large operations of the automotive and radio industries served to offset this somewhat. Trading on commodity exchanges, which has a part in the influencing of business in certain lines of chemicals and oils, was slack during the year. Mergers and acquisitions brought changes in competition and stimulated the establishment of numerous small concerns to take up the slack.

The greatest influence in the chemical, oil, and drug field was that of competition of materials. There was a marked development, in these industries and in the larger fields of consumption of their products, of processes which offered competition by synthetic products or made the use of cheaper substitutes practicable. Certain of these developments, such as the growth of the rayon industry in competition with other textile lines, cut deeply into the consumption of chemicals and oils used in the latter fields, but added to the demand for other materials adapted to the manufacture of the newer product. These developments, while maintaining the general level of business, shifted the volume of demand and changed the relative position of many materials.

The new year has started with promise in most lines of chemicals, oils, and drugs. Contracts have been on a parity with those at the beginning of 1929 in most of the larger items. Prices are not so high, and there is some feeling of uncertainty as to the rate and regularity with which deliveries will be called for during the first quarter of the year.

Data collected by the Oil, Paint and Drug Reporter in its usual year-end survey of the markets which it covers show that production and sales were consistently larger than in 1928, but indicate a deal of spottiness in prices. For all markets (fourteen groups) these data present the following picture:—

All Markets

	Compared with previous year 1929.	1928.
Production	103.6	104.0
Sales	104.3	104.4
Collections	100.3	101.2
Outlook	101.0	104.7
General condition	100.4	103.2
Prices	95.4	103.4
Prosperity index	95.8	106.7

The spottiness of the price situation (the figures represent prices at the end of the year) is more evident in the data for the general market groups, which are as follows:—

General Groups

	Compared with 1928— Production.	Sales.	Prices.	General condition.	Prosperity index.
Chemicals	104.7	105.2	100.0	100.3	100.3
Drugs	102.2	103.4	90.7	99.9	90.7
Oils	101.3	103.1	97.1	99.6	96.8
Paints	104.7	104.8	101.3	100.3	101.5
Petroleum	106.0	108.3	95.9	103.7	99.4

As the detail of the division of the market data increases, the variations in the factors naturally become more marked. An excellent picture of the strong points and the weak is presented in the following table:—

Individual Markets

	Compared with 1928— Production.	Sales.	Prices.	General conditions.
Industrial chemicals	107.5	107.6	102.4	102.0
Coaltar products	107.5	106.5	100.0	99.1
Fertilizer materials	100.9	101.9	93.3	99.9
Cottonseed products	98.3	98.4	79.8	98.1
Paint, varnish materials	106.0	105.2	103.2	99.8
Dyestuffs, tanstuffs	102.3	102.3	96.5	100.0
Petroleum oils	106.0	108.3	95.9	103.7
Gums, waxes, shellac	102.1	102.5	88.2	98.1
Naval stores	106.7	105.6	90.1	103.0
Flaxseed products	104.0	106.0	123.5	100.1
Drugs, fine chemicals	105.2	107.5	107.8	100.5
Botanical drugs	100.0	100.0	88.2	99.5
Essential oils	101.3	103.7	78.7	101.6
Oils, fats, greases	101.7	105.0	88.0	100.5
Averages	103.6	104.3	95.4	100.4

Prosperity's touch will continue to shift over chemicals, oils, and drugs during 1930. There is no likelihood that any division will be missed if it seek prosperity through sound thinking and hard work. There is no promise that any division will be particularly prosperous; although those which work the harder will have the larger share. It should not be expected that business in 1930 will reach its 1929 volume in every line. There is no reason to assume that no line will be more prosperous than it was last year. The opportunity for expansion has not been eliminated in any line—but it can never be foretold when those who would get rich without working will again "feel lucky."

Patience and push will be necessary for prosperity in 1930. Business must realize that prosperity is the result of its operations, not their cause. Grit will be needed for holding on in the face of competition of increasing severity. Gumption will help those who can see ahead clearly. Talk must give way to toil. Sweat must become more popular than swagger.

What World Pays for Gasoline and Kerosene

The following tabulation shows the retail gasoline and kerosene prices in various countries of the world on or about September 30, 1929, as compiled from reports submitted by consular officers and foreign representatives of the Department of Commerce. Attention is particularly invited to the fact that the prices quoted for the different countries should not be used for comparative purposes without taking into consideration the various factors which tend to make inequalities in prices. These factors include distance from source of supply, quantity consumed, transportation costs, import duties, excise taxes, distribution and marketing costs, quality of products sold, and many others:—

City.		Price per gallon— Gasoline.	Kerosene.
Algeria	Algiers	$0.28	$0.21
Angola	Loanda	.377	.315
Argentina	Buenos Aires	.351@.481	.338@.363
aviation grade		.494	..
Australia[1]	Sydney	.465@.486	.425
	Adelaide	.465@.486	.409
Austria	Vienna	.255	.134
Bolivia	La Paz	.648	.61
Brazil	Rio de Janeiro	.427	.303
British Guiana	Georgetown	.61	.72
British Malaya[1]	Singapore	.428@.445	.338@.399
Canada[1]	Calgary[2]	.32	.32
	Edmonton[2]	.36	.36
	Fort William[2]	.31	.31
	Halifax, Nova Scotia[2]	.32@.35	.32@.35
	Montreal[2]	.29@.32	.29@.32
	Ottawa[2]	.23@.26	.25@.30
	Regina[2]	.33	.33
	Toronto[2]	.28@.31	.29@.36
	Vancouver[2]	.30@.32	.28
	Winnipeg[2]	.28	.28
Ceylon[1]	Colombo	.468	.356
Chile	Santiago and Valparaiso	.393@.439	.362
China	Shanghai	.274@.295	.179@.219
aviation grade		.37	..
Chosen (Korea)	Seoul	.280@.344	.339@.354
Colombia	Bogota	.617	.578
Costa Rica	San Jose	.438	.425
Cuba	Havana	.28	.25
Czechoslovakia	Prague	.28	.23
Denmark	Copenhagen	.303	.253
Ecuador	Guayaquil	.34@.41	.30@.37
aviation grade		.48@.54	..
Ethiopia	Addis Ababa	.80@.91	.46@.53
Finland	Helsingfors	.291	.20
France	Lyon	.356@.370	.338@.341
	Strasbourg	.361	.34@.444
	Paris	.343@.358	.277@.292
Germany	Munich	.289	..
	Breslau	.315	.234
	Frankfort	.30	.34
	Cologne	.362	.307
Greece[1]	Athens	.39	.496
Guatemala	Guatemala	.39	.425
aviation grade		.47	..
Hungary	Budapest	.254	.225
India[1]	Calcutta	.39	.25@.388
Iraq	Bagdad	.30@.36	.14@.29
Irish Free State[1]	Dublin	.354	.323
	Rest of Free State	.374	.323
Italy	Genoa	.407	.439
Japan	Tokio	.219@.257	.219@.252
Java	Batavia	.364	.280@.305
Kenya[1]	Nairobi	.68	..
Latvia	Riga	.38	.161
Lithuania	Kovno	.345	.19
Luxemburg	Luxemburg	.29@.336	.236
Madagascar	Tananarive	.55@.63	.43
Mexico	Vera Cruz	.318	.265
	Mazatlan	.285	.232
	Guadalajara	.334	.297
aviation grade		.422	..
Mozambique[1]	Lourence Marques	.432	.334
Netherlands	The Hague	.27	.21
Nicaragua	Bluefields	.42	.40
Norway	Oslo	.27	.21
aviation grade		.32	..
Panama	Panama City and Colon	.32	.29
Paraguay	Asuncion	.404	.359
Persia[1]	Teheran	.522@.530	.280@.304
	Kazvin	.522@.546	.252@.273
	Isfahan	.409@.480	.294@.315
	Meshed	.614@.672	.394@.420
	Bushire	.362	.210
	Tabriz	.420@.462	.241@.285
Peru[4]	Lima	.40@.43	.24@.26
Philippine Isl.[5]	Manila	.38	.245
Poland	Warsaw	.349	.277
Porto Rico[6]	San Juan	.28	.23½@.26
Senegal	Dakar	.416	.372
Society Islands	Tahiti	.30@.32	.35@.37
Switzerland	Berne	.402	.29
	Zurich	.402	.29
Turkey	Istanbul	.335@.384	.36@.381
Union of South Africa	Johannesburg	.55	.41@.45
	Durban	.40	.31@.34
	Cape Town	.40	.31@.34
United Kingdom[1]—			
England	London	.345	..
Rest of England and Wales		.355	..
Scotland, North		.376	..
Scotland, South		.355	..
North. Ireland	Belfast	.376	..
Rest of Northern Ireland		.386	..
Uruguay	Montevideo	.372	.354
aviation grade		.559	..
Venezuela	Caracas	.328	.51
Yugoslavia	Belgrade	.452	.57

[1] Price per imperial gallon, which is approximately equivalent to 1.2 U. S. gallons.
[2] Gasoline price includes tax of 5 cents.
[3] Gasoline price includes tax of 3 cents.
[4] Gasoline price includes a Federal tax of 12c. per gallon and a municipal tax of 4 centavos.
[5] Gasoline price includes tax of .76 per gallon.
[6] Gasoline price includes a sales tax of 4c. per gallon.

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Petroleum and Its Products: Market Review

The year 1929 was the greatest consumption period in the history of the petroleum industry. Due to the vast overproduction of crude oil the economic balance of the industry was fundamentally a critical one, but its potentialities were statistically better than the outlook in 1928, and the year surpassed any previous period in the point of profit and constructive progress. Earnings and dividend disbursements reached a new high mark not only in the refining and marketing divisions of the industry but, last year, also included those companies primarily engaged in crude producing. While in a lower position than 1928, prices for the principal petroleum products withstood to a large measure the negative effects of the unprecedented output of crude.

The huge overproduction of crude was the outstanding event of the year. Mainly through unbridled flow at the flush fields in California and Oklahoma the crude output was far beyond market requirements and although restriction efforts were quite vigorous they met strong opposition from some of the less integrated producers. In many instances some of the larger producers were opposed to sharp curtailment as in California, where it was found necessary to reduce the posted prices before a real progressive curtailment program was effected. At the close of the year, however, the conservation issue appeared to be getting into hand, and the cut in prices at the Midcontinent a few weeks ago would probably rationalize conditions to a great extent.

Conservationists hailed the passage of the Lyon act in California, which would prohibit wastage of natural gas and thus, automatically, curtail oil production, as a boon to the industry. The law, however, met with immediate opposition, its constitutional legality was questioned and is not yet operative.

The pact combining one of the leading American oil companies and the German dye trust for the mutual development of the catalytic hydrogenation process of refining was one of the year's accomplishments. General conditions in refinery markets were improved over 1928, despite the forced overproduction. Gasoline consumption was sharply up and marketing methods were conducted upon a visably higher ethical plane than in the preceding year. Up to the moment of writing, over 12,000 signatures have been added to the code of ethics adopted by the industry a year ago and adherence to these regulations has done much to rid the trade of the many destructive factors that have been so evident in the eager drive for bigger sales, as heretofore.

Automobile Output Up

Automobile production in the United States during 1929 aggregated 5,358,361 vehicles of all classes, or an increase of 999,602 over 1928. It had been anticipated that the total production would show to further heights, but in reaction to the deflation in the securities market, automobile production in the final month of the year fell to the unusually low figure of 119,950 machines, the lowest for any one month in the past two years.

The trend of demand for high-compression engines was continued last year and reflected in the increased call for premium grades of gasoline. It has been estimated that in 1929 more than 20 percent of all the gasoline sold in the country commanded a premium which ran as high as 3c. per gallon.

The outlook for automobile production in 1930 was not so promising as a year ago. According to indications given to automobile manufacturers, the stock crash has not yet been liquidated and a direct reflection is always felt in this branch of industry. Then, too, there is usually a normal let-down after record years as in 1920 and it is probable that the automobile industry in the United States will lie easy over the first half of the year. In the meanwhile, the manufacturers announce a concerted drive for expansion in the export field.

New Financing

New financial activity played an important role in the progressive march of the petroleum industry last year. The open avenue for investment support during the bull market of 1929 gave opportunity for commencing expansive construction operations in the form of new refineries, additional pipe line services and extensions to those already in operation. Several companies took advantage of the chance to retire bond issues, mortgages and other permanent debts in favor of common stock issues, which were in high demand from investment and speculative interests and which were more favorable in the event that adverse industrial conditions might arise.

As in general industry, mergers and consolidations were quite prominent last year. Particularly evident was the movement on the part of some of the well integrated companies to extend their resources in a lateral direction from the producing well into deep zone marketing. In this manner many of the smaller and financially weaker companies were assimilated by the larger units.

Leading the list of financial operations in 1929 was a bond issue in the amount of $100,000,000, which was the largest single piece of bond financing since December, 1926. It was largely through consolidation of interest that placed the sellers of California gasoline in so fortunate a position last year.

In addition to direct financing there were numerous investment trusts inaugurated for the purpose of acquiring large blocks of stock in petroleum companies. The break in stock values in October temporarily halted a number of investment programs, but did not so seriously affect the position of oil securities like in the case of industry as a whole, as the oil group did not follow the general upward march of securities values through the early part of the year, having been under pressure from the apparent irrationalized position of the trade due to the overproduction of crude.

Crude Peroleum

Domestic crude petroleum production during 1929 shattered all previous records and as estimated by the Oil, Paint and Drug Reporter, total commercial production reached 997,214,000 barrels, compared with 883,405,000 barrels during 1928. Gross production in 1929, including oil burned as fuel on leases in drilling operations, seepage, and other losses, was estimated by the Oil, Paint and Drug Reporter at 1,007,186,000 barrels, compared with 892,000,000 barrels gross output in 1928. Record production for the year averaged 2,961,200 barrels per day, reached during the week ended September 7, compared with 2,539,700, representing the peak for 1928, attained during the week ended December 29.

Flush pools at Oklahoma and California were outstanding in interest during the year. The relatively new Oklahoma City pool, the Seminole and Earlsboro fields in Oklahoma and the flush fields of Santa Fe Springs, Signal Hill and Seal Beach were of paramount concern and were the chief offending figures in the sentiments expressed towards curtailment of production and conservation. Restricted activity through the agency of proration rules was adopted at most of the important fields, but in many cases these regulations were ignored by the operators. Particular in this respect was the initiation of the Lyon gas conservation law in California, which was indirectly designed to conserve the State's oil resources and which was long heralded as a remedy for the vast overproduction. The law became technically effective in September, but was flagrantly disregarded and its constitutional legality was attacked. It was not until a sweeping reduction of prices at the leading flush fields that any material amount of attention was paid to restricting output. The reduced price scale was only effective for two weeks and the former level was restored on the promise of the operators to hold their activity within limited confines.

In Oklahoma, West and Panhandle Texas, numerous plans were used to stem the unprecedented flow, but with new wells, tests and the attitude of independent producers against limited output, only partial success was attained. The sharp cut in prices which was effected during the opening weeks of 1930, however, should produce, to a good measure, the desired curtailment.

Utilization of the "five-spot" drilling plan, by which water is pumped into four wells to force the oil through a single well in the center, proved to be a great boon to crude producers in the Pennsylvania area. During the year under review one of the leading producers completed the major portion of a campaign begun in the Spring to drill 600 wells in the Bradford area and their efforts in that direction have brought the production at that field up to 26,350 barrels daily. Average prices of crude per barrel in the Bradford district were $3.6946 during 1929. The average price of crude in the Eastern territory was $3.645 per barrel.

Aside from the huge output of crude there were two other developments of major importance in 1929, both of which should tend to stabilize conditions. One, the development of the hydrogenation process of refining and the other, the unitized operation of oil pools. The former was long a laboratory proposition, but through a development agreement between one of the leading American oil companies and the German dye trust, should reach the commercial stage in the Spring. This process is expected to revolutionize present refining methods. Under the process low-grade crude oils may be run through the stills for the manufacture, in greater quantities on a percentage basis, of either gasoline or high grade lubricants, whichever the refiner prefers. At present it is possible to obtain only a small percentage of gasoline from low grade Venezuelan crude, while the residue is used only for fuel. This condition will be completely changed through the hydrogenation process.

The plan for unitized operation of oil pools was endorsed by the American Petroleum Institute at their annual meeting in December. In the past each holder of lands or leases in an oil pool has been forced to drill wells and produce oil as rapidly as possible in order to obtain a share of the crude supply. Necessarily such conditions incited competition, inefficiency, waste and most important of all, overproduction. Through the unit plan this disturbance is corrected. Under the plan, which is particularly applicable to virgin pools, the operators centralize the management and control of production, drilling, site for wells and developments is placed in the hands of a committee comprised of representatives of the operators themselves. Thus it super-

World Production of Crude Petroleum

	1929[1] Barrels of 42 U. S. Gallons	1929[1] Percent of total	1928[2] Barrels of 42 U. S. Gallons	1928[2] Percent of total	1857 to 1927[3] Barrels of 42 U. S. Gallons	1857 to 1927[3] Percent of total
United States	1,008,000,000	68.0	901,474,000	68.0	10,341,675,000	65.32
Venezuela	136,000,000	9.2	105,523,000	8.0	137,656,000	0.87
Russia[4]	103,000,000	6.9	[5]90,000,000	6.8	[5]2,247,625,000	14.20
Persia	45,000,000	3.0	42,100,000	3.2	261,187,000	1.65
Mexico	44,250,000	3.0	50,150,000	3.8	1,471,338,000	9.29
Roumania	35,000,000	2.4	30,600,000	2.3	274,174,000	1.73
Dutch East Indies	32,000,000	2.3	30,000,000	2.3	362,662,000	2.29
Colombia	20,500,000	1.4	19,900,000	1.5	23,645,000	0.15
Peru	13,250,000	0.9	11,970,000	0.9	82,227,000	0.52
Trinidad	9,000,000	0.6	7,750,000	0.6	28,641,000	0.24
Argentina	8,500,000	0.6	9,100,000	0.7	43,238,000	0.27
British India	8,500,000	0.6	8,300,000	0.6	181,445,000	1.15
British Borneo	5,500,000	0.4	5,290,000	0.4	30,647,000	0.19
Poland	5,250,000	0.3	5,530,000	0.4	207,779,000	1.31
Egypt	2,000,000	0.1	1,897,000		15,439,000	0.10
Japan and Taiwan[4]	1,800,000	0.1	1,800,000		54,819,000	0.35
Ecuador	1,250,000		1,090,000		[6].....	[6]....
Canada	1,100,000		625,000		26,737,000	0.17
Bolivia	1,000,000		[6].....		[6].....	[6]....
Iraq	750,000		650,000		[6].....	[6]....
Germany	650,000		683,000		18,596,000	0.11
France	575,000		564,000	0.5	4,208,000	[6]....
Czechoslovakia	[6].....	0.2	150,000		937,000	[6]....
Italy	[6].....		43,000		1,358,000	[6]....
Algeria	[6].....		12,000		100,000	[6]....
Barbados	[6].....		[6].....		[6].....	[6]....
Cuba	[6].....		[6].....		[6].....	[6]....
England	[6].....		[6].....		19,000	[6]....
Other countries	250,000		30,000		1,955,000	0.09
Total	1,483,125,000	100.0	1,325,231,000	100.0	15,832,115,000	100.00

[1]Estimated by Oil, Paint and Drug Reporter.
[2]Various records.
[3]Records of United States Bureau of Mines.
[4]Includes part of Sakhalin.
[5]Includes Sakhalin.
[6]Included under "Other Countries."

vises the pool, quite as if it were owned by one company.

Foreign Output

Venezuela continued in its position as the second leading factor in the world oil picture. According to the estimate of the Oil, Paint and Drug Reporter, production amounted to 136,000,000 barrels in 1929, compared with 108,000,000 barrels during the preceding year. There were some sporadic efforts at curtailment there, but nothing has been done along definite lines, and as shipments from Venezuela comprise more than 60 percent of the United States' imports, the unrestricted flow has caused no end of agitation among oil producers here. One of the chief objections to restricting output here is the fact that those companies most active in curtailment programs have substantial interests in Venezuela, and if domestic output is conserved these firms could easily make up the loss by increasing their production in South American fields. In furtherance of this there has been a strong plea by independant producers for a tariff on petroleum imports. Total imports of Venezuelan crude into the United States were estimated by the Oil, Paint and Drug Reporter at 54,995,000 barrels during 1929, an increase of about 19 percent over 1928.

Mexican production was off for the year and adverse legislation was again a hindering factor in Colombia. In the latter area, one of the leading American oil companies withdrew from virtually all producing activities during the past year. Total South American production as estimated by the Oil, Paint and Drug Reporter aggregated 223,750,000 barrels during the year under review, compared with 198,100,000 barrels during the year 1928.

Conservation

Again in 1929 the American petroleum industry exercised considerable constructive pressure toward oil conservation but could not prevent the excess output. The action of the new Presidential administration in announcing that it would hereafter be the government policy to withhold its mineral lands from development so long as there existed over-production from privately-owned areas, has done much to help the situation, though its action has been opposed from some of the public land States where it was desired to place the public lands into private ownership so that the States involved could derive taxation benefits from it.

A comprehensive picture of the government's stance in the matter of leasing of public lands is given in the following statement, printed in substance, by Ray Lyman Wilbur, secretary of the Interior:—

The position of the Federal government is not to interfere with the rights and duties of the local State governments but to lend such aid as it can and to participate in the solution of the problems. Voluntary co-operation in the industry and wise exercise of the police power by the States must be the basis for conservation.

Unsound exploitation of the public domain under oil prospecting permits has, in some cases, been shocking. Although the law allows two years within which very moderate drilling requirements may be met, and provides for extensions thereafter up to a possible total of nine years, an examination of the outstanding permits, occasioned by the President's conservation order, has so far disclosed that, up to November 15, 10,995 of these permits required cancellation for lack of diligence out of approximately 20,300 outstanding.

Very careful consideration will continue to be given to equities, particularly legitimate development and reliable geological investigations. That the cessation of issuance of prospecting permits has no immediate prospect of injuring the oil industry of any of the States affected is apparent when it is considered that in the seven major public land oil States of Wyoming, Utah, Idaho, Colorado, Montana, New Mexico, and California, the number of wells completed to production on public lands in all of 1928 and the first half of 1929 amounted to 249, whereas on March 12, 1929, the date of the conservation order, there were shut-in wells in those States totaling 4,115.

The great disproportion of these figures is occasioned by the situation in California where new wells on the public lands for the year and a half ending July 1 totaled 71 wells, whereas the shut-in wells on all the lands of the State on March 12 totaled 3,560. But shut-in wells outnumbered new public land wells in every one of these States except New Mexico.

In the absence of a need for production from new wells, as evidenced by these figures, further exploitation of the public domain at the present time means overproduction and consequent further wastage of an irreplaceable resource.

The conservation programs adopted at various fields during the past year were numerous but were widely disregarded by the independent operators. The cut in prices throughout the Midcontinent during the early part of January this year, however, should materially aid the constructive efforts being exercised toward preventing overproduction and waste.

Petroleum Market Trend

Crude petroleum prices continued their upward course during the early part of 1929, and other than in the closing quarter of the year, when Pennsylvania prices were reduced precipitately, prices were higher than in the preceding year. Average prices moved within a 13c. spread last year, compared with 30c. during 1928. A widespread advance in the Midcontinent in May brought prices to their highest level since the opening of the 1927 period. A feature to the trend of the market last year was the fact that posted prices at Pennsylvania were no longer considered as an indicator of the general price position, a reduction of more than 25 percent having occurred in the final six months of the year without similar response from the Midcontinent or California.

The recovery noted in refinery gasoline prices toward the close of 1928 was removed and, barring a state of buoyancy during the summer, the general curve moved downward. The harrying position of California gasoline was mainly responsible for the declining position shown.

Of the three groups illustrated, filling station prices were more stabilized than crude petroleum or refinery gasoline. While generally downward, declines were easy and prices were not materially below the position of 1928.

The trend of prices in 1929, with comparison for the corresponding dates in 1928, is illustrated by the quarterly averages, which follow:—

	Average of typical markets									
	January 1—		April 1—		July 1—		October 1—		December 1—	
	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.
Crude petroleum at wells, per barrel....	$1.74	$1.457	$1.658	$1.437	$1.757	$1.502	$1.652	$1.599	$1.612	$1.74
Gasoline at refineries, per gallon	.09	.0706	.08316	.0775	.095	.0944	.07625	.1066	.075	.09
Gasoline at filling stations, per gallon....	.1997	.1804	.1947	.1855	.1955	.1967	.1942	.2067	.1922	.1997

Refinery Products

Consumption of practically the entire line of refinery products showed a substantial advance over the aggregate domestic requirements of 1928, but prices for these products were conversely disposed. All of the constructive movement of the refinery values during 1928 was removed through continued overproducing of crude and the resulting output of derivatives beyond market needs. Prices for light oils showed an approximate loss of 25 percent from their value at the opening of the year, but the heavy oil division of the market was not so seriously affected.

At the end of 1928 the American Petroleum Institute estimated that the 1929 increase in gasoline demand would approximate 10 percent, and refiners were given this figure as a working basis. Actual needs, however, exceeded the 1928 rate by approximately 6,625,000 gallons daily, or, roughly, 15 percent above 1928 needs. For 1928 and 1927 the increases over the previous years were 9.5 percent and 13.5 percent. Actual output of gasoline was approximately 17 percent over the 1928 output. Stocks on hand at the close of November were close to the 38,000,000-barrel mark, representing a thirty-two-day supply, compared with a twenty-nine-day supply a year ago.

Weakness in the fuel oil market during 1928 was fully recovered as the market closed the 1929 season. For the greater part of the year a buyers' market reigned, but improvement was steady and at the close of the year there was but little discernible difference between the reigning prices and those representing the high position of the market during 1928.

Eastern lubricating oils continued their upward price trend and at the close of the year reached a point to treble their value at the opening of 1928. Kerosene was sluggish throughout the year.

The activity of American oil companies in export markets was markedly broadened. Prices for the entire line of products were low and at a point where foreign buyers found it more advantageous to purchase refined materials rather than crude oil. The co-operative marketing efforts for producers abroad was formidable enough to serve as a barrier to any material increase of business in foreign channels.

Gasoline Tankwagon Markets

With the signatures of over 12,000 representative marketers appending the code of ethics to govern marketing operations for gasoline drafted by the American Petroleum Institute it was to follow naturally that marketing practices were conducted on a much better plane in 1929 than previously. Aside from removing secret concessions, promiscuous free distribution of pumping equipment and other harmful practices, the policy of establishing a posted price was most prominently adhered to last year. The number of reported price changes was relatively few during the latter half of the year.

The rapid spread of State taxation on gasoline sales was one of the outstanding features to the retail gasoline market last year. Twenty-one States increased their rates in 1929 and one, New York, adopted a gasoline tax for the first time and completed a cycle of gasoline taxes which now includes every State in the Union. Seven States now levy a tax of 2c. per gallon; eleven have a 3c. tax; one charges 3½c.; nineteen have a 4c. rate; eight charge 5c. per gallon, and three States are collecting 6c. on every gallon consumed by motor vehicles.

The increased demand for premium grades of gasoline was another feature of 1929. Sales of ethyl gasoline were estimated to have been increased 100 percent over 1928 and approximately 10 percent of the motor gasoline consumed was being blended with ethyl fluid.

In addition to the apparent move within the industry to adhere to the prescription of the code of ethics, which has received Federal endorsement, the expansion of marketing facilities by several of the refining companies was largely influential in bringing about the improvement in the tankwagon and retail markets last year. Several refiners acquired chains of retail and distributing stations to place themselves with direct marketing outlets and benefit from the economics of self-operated distribution channels.

Gasoline and Naphtha

Prices in the gasoline market moved within narrower ranges last year than in 1928 and their general course was downward, falling below the levels of the preceding year. While domestic consumption broke all previous records, general excess production removed the factors that make for stability and a buyers' market reigned through the entire year. The recovery in prices indicated toward the close of 1928 was eliminated early in the new year and at no time during 1929 did the price of U. S. Motor at group 3 reach the 9c. per gallon level. The nearest approach to this figure was in May, and again in July, when 8½c. per gallon was obtainable at brief periods. By comparison with its corresponding position in 1928, the market at the opening of the year showed a gain of almost 2c. per gallon, but in February sharp reductions brought prices for both years virtually to a parity. Export quotations for gasoline and naphthas at both the Eastern Seaboard and the Gulf were reduced in January and February but were without change through the remainder of the year. Considerable dumping of California gasoline in the Eastern market was a harrying factor last year. Weekly receipts in the East were frequently above the 700,000 barrel mark and, unlike in 1928, prices were always at a competitive plane with the prices named by the refiners here. Closer integration of the sellers of this material was responsible for this condition. Pennsylvania gasoline was also lower in 1929 than in the previous year.

Details of supply, demand, and stocks in the past year, as gathered by the Bureau of Mines, follow:—

	Barrels		
	Production.	Stocks end of period.	Domestic demand.
January ...	34,335,000	40,648,000	22,602,000
February ..	31,264,000	45,704,000	22,776,000
March	34,467,000	47,205,000	28,495,000
April	34,636,000	47,015,000	32,019,000
May	36,270,000	44,648,000	34,117,000
June	35,606,000	41,461,000	33,093,000
July	37,855,000	37,880,000	36,860,000
August	38,510,000	33,788,000	37,759,000
September ..	37,152,000	33,222,000	34,193,000
October	39,663,000	35,042,000	32,816,000
November ..	37,350,000	37,780,000	31,502,000
December ..	37,133,000	43,115,000	26,550,000

Kerosene

Prices in this division of the refinery market also moved within narrow ranges last year and the high and low quotations for 1929 showed only a fractional downward difference from their position in 1928. Average prices, however, showed a decline of approximately 15 percent, particularly during the latter half of the year. Production did not reach the volume of 1928. Further intensity to the competition in the export market lost a measurable portion of foreign business for the American producers and coupled with the general low position of prices in consideration with high-priced crude, some of the market factors were not what might be called anxious producers of this material. The one point toward stabilization last year was the widened use of kerosene distillate as furnace oil. Pennsylvania prices for the year ranged from a low of 6c. per gallon for 45 water white to a high of 7¾c. per gallon, and on 47 water white, from a low of 6¾c. to a high of 8¼c. per gallon. The Oklahoma 41-43 grade ranged from 4¼c. to 6⅛c. per gallon in 1929, compared with 4c. to 6⅜c. per gallon during the previous year. North Texas prices on the same grade were similar with the 1929 low at 4⅛c. per gallon, compared with 4¼c. in Oklahoma.

Details of production, demand, and stocks for 1929, as gathered by the Bureau of Mines, follow:—

	Barrels		
	Production.	Stocks end of period.	Domestic demand.
January	4,700,000	8,865,000	2,956,000
February	4,435,000	8,210,000	3,519,000
March	4,515,000	7,855,000	2,976,000
April	4,434,000	7,497,000	3,156,000
May	4,902,000	7,742,000	3,200,000
June	4,928,000	8,348,000	2,547,000
July	4,406,000	8,797,000	2,684,000
August	5,111,000	8,689,000	3,189,000
September ...	4,667,000	8,864,000	3,387,000
October	5,379,000	8,865,000	3,136,000
November ...	4,829,000	9,366,000	3,043,000
December ...	4,848,000	9,039,000	3,513,000

Fuel and Gas Oils

At the opening of 1929 fuel oils in the Group 3 area were wholly advantageous to the buyer, but as the first quarter progressed the market underwent a change in tone and recovery was the keynote during the remainder of the year. At the close there was not much difference between the ruling market and the high figures of the preceding year. Pennsylvania fuel oils were correspondingly higher in 1929, after a low opening and also some reduced liquidation during the fall. In Oklahoma, 22-26 fuel oil opened the year at 55c. per barrel and periodic advances of 2½c. and 5c. per barrel brought the market up to 90c. per barrel at the close of the year, or 2½c. above the high figure for the preceding year. North Texas, 24-26 gravity oil, also opened the year at 55c. per barrel and closed strongly at 70c. per barrel, compared with a high of 72½c. per barrel during 1928. Wide marine activity throughout the year was thought to have created new consumption records for diesel oils and bunker C. The latter was without price change all year, but there was some consideration given to possibility of an advance during the summer period. Higher charter rates at the Gulf and a scarcity of transporting carriers gave rise to talk about regaining at least a portion of the 30c. net decline registered during 1928. Gas oil supplies were liberal throughout the year and demands were heavier than the year previous. High prices for the year were fractionally above the peak for 1928 and while the market moved within a limited range, it was always above the low figures of 1928. The year just completed was the heaviest on record as regards the installation of oil burning furnaces and reflected directly in the demands for furnace oils. The expanded outlet for this oil was mainly responsible for refiners' ability to keep stocks at a low level, which are measurably above 1928, but not so greatly augmented as other refinery products.

Details of production and stocks for the past year, as gathered by the Bureau of Mines, follow:—

	Barrels	
	Production.	Stocks end of month.
January	36,838,000	131,204,000
February	34,331,000	129,402,000
March	37,456,000	130,690,000
April	37,533,000	133,736,000
May	38,570,000	137,317,000
June	37,338,000	140,992,000
July	37,980,000	145,721,000
August	39,011,000	147,678,000
September	37,468,000	150,656,000
October	38,974,000	149,793,000
November	36,134,000	148,117,000
December	36,261,000	146,085,000

Above figures on stocks on hand include heavy crude oil in California.

Paraffin Waxes

The improvement to wax prices noted during 1928 was sharply depreciated during 1929 and price for white Pennsylvania scale was reduced from 5¾c. per pound at the year's opening to 3¼c. at the close. Oklahoma crude scale was down from 4⅞c. per pound at the opening to 2⅝c. per pound at the close. Production was sharply up from the 1928 total and the desire for liquidation was particularly noticeable during the summer months when Pennsylvania sellers were offering stocks as low as 2¾c. per pound. The sale of domestic wax through export channels did not reach anticipated volume last year. The wide offering of Polish wax throughout Europe caused a considerable loss in this business to the American producers. The year closed with a heavy carryover of stocks and prices showing further tendency to disintegrate.

Details of production, demand and stocks for the past year, as gathered by the Bureau of Mines, follow:—

	Pounds		
	Production.	Stocks end of period.	Domestic demand.
January ...	58,885,000	123,521,000	20,625,000
February ..	50,027,000	140,053,000	11,256,000
March	56,372,000	158,404,000	18,469,000
April	57,976,000	170,687,000	25,709,000
May	53,783,000	179,139,000	29,417,000
June	52,714,000	188,764,000	21,173,000
July	46,171,000	191,298,000	23,798,000
August	53,377,000	190,878,000	31,116,000
September ..	44,513,000	183,714,000	22,583,000
October	56,377,000	189,004,000	15,903,000
November ..	50,775,000	185,559,000	30,234,000
December ..	49,104,000	187,990,000	24,179,000

Lubricating Oils

High-priced Pennsylvania crudes brought about similarly higher prices for Pennsylvania lubes during the year recently completed. This trend was particularly noted in cylinder stocks, the neutral oils having shown their conservative market characteristics as in 1928. At the close o

December prices for Pennsylvania steam refined cylinder stocks were more than three times their value at the opening of 1928. Production was up from 1928 and again last year the export market proved to be a ready outlet. In the Group 3 area there was not much fluctuation of prices. Neutral oils were fractionally below their opening levels due to over-production.

Details of production, demand and stocks for the past year, as gathered by the Bureau of Mines, follow:—

	Barrels		
	Production.	Stocks end of month.	Domestic demand.
January	2,945,000	8,649,000	1,521,000
February	2,503,000	8,534,000	1,751,000
March	2,943,000	8,853,000	1,581,000
April	2,899,000	8,527,000	2,442,000
May	3,005,000	8,370,000	2,322,000
June	2,928,000	7,969,000	2,446,000
July	2,936,000	7,524,000	2,167,000
August	3,143,000	7,478,000	2,268,000
September	2,852,000	7,589,000	2,054,000
October	2,885,000	8,021,000	1,378,000
November	2,555,000	8,117,000	1,858,000
December	2,765,000	8,269,000	1,716,000

Export Markets

American activity in foreign markets showed more than usual growth last year as refiners sought additional outlets for the vast volume of over-produced materials here. As in 1928, prices prevailing for principal refinery products throughout the year were low enough to warrant greater advantage to the foreign buyer to import refined products rather than buy high-priced crude and do their own refining. Reductions in January and further easiness in February brought export gasoline prices substantially below the levels of 1928 and to a relative point of little profit.

There was an attempt to advance the price level of gasoline, but it failed to develop into material being. This move was proposed at a meeting of the Export Petroleum Association in June, but, according to information made public after the meeting, this action was deferred until the export price committee of the association had investigated the market situation. There followed a number of conferences between American and European oil executives, but as yet there has been no report on the investigation made public. According to private information, which was believed to be reasonably authentic, it was stated that the American representatives of European oil interests opposed the move for an advance in prices and their attitude was also substantiated by several California oil companies. The rules of the association require 100 percent approval before any such step can be taken, and, in view of this, it was believed in some circles that the action has been shelved.

The position of the California sellers was easily understandable. During 1928 and more so in the year just completed, foreign demands for California gasoline were greatly augmented. In addition to its adaptability for easy blending into anti-knock fuels, the low prices which the California sellers were able to offer throughout 1929 proved an attractive feature to foreign buyers and a measurable amount of business which had formerly passed through the Atlantic Coast and Gulf ports was diverted to the Pacific Coast.

Domestic exports of refined petroleum as reported by the Department of Commerce during the first 11 months of 1929 amounted to 114,727,371 barrels, compared with 431,655,668 barrels during the corresponding period of 1928. Of this amount, gasoline naphtha and other light products constituted 54,049,006 barrels with an aggregate value of $241,497,131, compared with 48,081,727 barrels with a total value of $214,783,491 during the corresponding period of 1928. Gas and fuel oil exports were running behind the preceding year, amounting to 32,598,843 barrels, compared with 38,387,327 in 1928. Export consumption of paraffin was sharply off from 1928, amounting to 292,892,770 pounds, compared with 336,044,654 pounds during the first eleven months of the previous year. This has mainly been due to the expanded output of Polish and Russian wax refineries, which, during the opening half of the year, literally flooded the European market with low-priced wax. Lubricating oil exports were also off from 1928, amounting to 9,763,634 barrels, compared with 9,983,492 barrels in 1928.

Crude Petroleum: Price Changes: 1929 and 1928

Cabell, W. Va.

	Per barrel	
	1929.	1928.
January 1	$1.45	$1.50
February 9	1.45	1.35
March 12	1.35	1.35
April 27	1.50	1.35
May 22	1.65	1.35
June 13	1.65	1.45

Corning, Ohio

	Per barrel	
	1929.	1928.
January 1	$1.90	$1.55
January 25	1.75	1.55
May 22	1.90	1.55
June 29	1.90	1.70
August 8	1.90	1.80
December 6	1.80	1.80
December 17	1.80	1.90

Lima, Ohio

	Per barrel	
	1929.	1928.
January 1	$1.60	$1.71
January 25	1.50	1.71
February 10	1.50	1.55
April 26	1.65	1.55
May 21	1.80	1.55
July 26	1.80	1.60

Pennsylvania
(Bradford Oil in National Transit Lines)

	Per barrel	
	1929.	1928.
January 1	$3.85	$2.80
January 4	4.10	2.80
June 13	4.10	3.05
July 1	4.00 @4.05	3.05
July 9	4.00 @4.05	3.20
July 16	3.75 @3.80	3.20
August 1	3.50 @3.55	3.20
August 16	3.25 @3.30	3.20
September 14	3.25 @3.30	3.35
October 1	3.00 @3.05	3.35
October 13	3.00 @3.05	3.45
November 8	3.00 @3.05	3.60
December 14	3.00 @3.05	3.85

Pennsylvania
(Other Oil in National Transit Lines)

	Per barrel	
	1929.	1928.
January 1	$3.75	$2.05
January 4	4.00	2.05
June 13	4.00	2.90
July 1	4.00 @4.05	2.90
July 9	4.00 @4.05	2.90
July 16	3.75 @3.80	3.10
August 1	3.50 @3.55	3.10
August 16	3.25 @3.30	3.10
September 14	3.25 @3.30	3.25
October 1	3.00 @3.05	3.25
October 31	3.00 @3.05	3.35
November 8	3.00 @3.05	3.50
December 14	3.00 @3.05	3.75

Wooster, Ohio

	Per barrel	
	1929.	1928.
January 1	$1.77	$1.57
January 25	1.63	1.57
May 21	1.78	1.57
July 26	1.78	1.67
October 13	1.78	1.77

Illinois

	Per barrel	
	1929.	1928.
January 1	$1.55	$1.77
February 23	1.55	1.50
February 25	1.45	1.50
April 26	1.60	1.50
May 21	1.75	1.50
July 26	1.75	1.65

Indiana

	Per barrel	
	1929.	1928.
January 1	$1.37	$1.47
January 25	1.27	1.47
February 10	1.27	1.32
April 26	1.42	1.32
May 21	1.57	1.32
July 26	1.57	1.37

Plymouth, Ill.

	Per barrel	
	1929.	1928.
January 1	$1.28	$1.33
January 25	1.18	1.33
February 23	1.18	1.28
May 21	1.28	1.28
July 20	1.28	1.28

Princeton, Ind.

	Per barrel	
	1929.	1928.
January 1	$1.55	$1.60
January 25	1.45	1.60
February 23	1.45	1.50
April 26	1.60	1.50
May 21	1.75	1.50
July 26	1.75	1.55

Waterloo, Ind.

	Per barrel	
	1929.	1928.
January 1	$1.35	$1.35
January 25	1.50	1.35

Western Kentucky

	Per barrel	
	1929.	1928.
January 1	$1.63	$1.33
April 26	1.78	1.33
May 21	1.83	1.33
July 18	1.83	1.48
September 17	1.68	1.48
October 2	1.68	1.63

Oil City

	Per barrel	
	1929.	1928.
January 1	$1.65	$1.50
February 16	1.50	1.50
May 2	1.65	1.50
June 3	1.80	1.50
September 1	1.80	1.65

Oklahoma-Kansas, North, East, and Central Texas

	Per barrel	
	1929.	1928.
January 1	$0.60 @1.76	$1.10 @1.60
January 25	.60 @1.44	1.10 @1.60
February 16	.60 @1.44	.75 @1.60
February 21	.60 @1.44	.76 @1.76
May 20	.70 @1.85	.76 @1.76
July 26	.70 @1.85	.60 @2.16

Somerset

	Per barrel	
	1929.	1928.
January 1	$1.75	$1.60
February 9	1.75	1.45
February 15	1.60	1.45
March 12	1.50	1.45
April 27	1.65	1.45
May 22	1.80	1.45
June 13	1.80	1.55
July 30	1.80	1.70
September 14	1.80	1.75
November 12	1.65	1.75

Gulf Coast "A"

	Per barrel	
	1929.	1928.
January 1	$1.20	$1.20
February 4	1.10	1.20
May 22	1.30	1.20

Gulf Coast "B"

	Per barrel	
	1929.	1928.
January 1	$1.15 @1.45	$1.15 @1.37
February 4	1.05 @1.47	1.15 @1.45
May 22	1.15 @1.47	1.15 @1.45

California
(Signal Hill, Seal Beach, Huntington Beach, Inglewood, Olinda-Brea Canyon, Rosecrans, Dominguez, Torrance and Richfield)

	Per barrel	
	1929.	1928.
January 1	$0.85 @1.35	$0.85 @1.09
January 18	.70 @1.35	.85 @1.09
August 16	.70 @1.35	.85 @1.35
October 21	*.40 @ .60	.85 @1.35
November 4	.70 @1.35	.85 @1.35

* Signal Hill and Seal Beach only.

California
(Whittier and La Habra)

	Per barrel	
	1929.	1928.
January 1	$0.85 @1.16	$0.85 @ .91
August 16	.85 @1.16	.85 @ .92

California
(Coyote Hills)

	Per barrel	
	1929.	1928.
January 1	$0.85 @1.20	$0.85 @ .95
August 16	.85 @1.20	.85 @1.20

California
(Santa Fe Springs)

	Per barrel	
	1929.	1928.
January 1	$0.89 @1.65	$0.89 @1.65
August 16	.89 @1.65	.89 @1.45
October 21	.40 @ .60	.89 @1.45
November 4	.89 @1.65	.89 @1.45

California
(Kern River)

	Per barrel	
	1929.	1928.
January 1	$0.45 @0.50	$0.75 @1.11
October 3	.45 @ .50	.45 @ .65
October 29	.45 @ .50	.45 @ .50

California
(McKittrick and Newhall)

	Per barrel	
	1929.	1928.
January 1	$0.75 @ —	$0.75 @1.11
January 18	.50 @ —	.75 @1.11
August 16	.50 @ —	.75 @ —

California
(Midway, Sunset, Elk Hills, Lost Hills)

	Per barrel	
	1929.	1928.
January 1	$0.75 @1.40	$0.75 @1.44
January 18	.50 @1.40	.75 @1.44
August 16	.50 @1.40	.75 @1.40

California
(Wheeler Ridge and Coalinga)

	Per barrel	
	1929.	1928.
January 1	$0.75 @1.30	$0.75 @ .33
January 18	.50 @1.30	.75 @ .99
August 16	.50 @1.30	.75 @1.30

Bellevue

	Per barrel	
	1929.	1928.
January 1	$1.25	$1.25
February 4	1.20	1.25
February 21	1.20	1.20
May 29	1.30	1.20
July 30	1.30	1.25

Bull Bayou, Caddo, Haynesville, El Dorado, Homer, Crichton and De Soto

	Per barrel	
	1929.	1928.
January 1	$0.81 @1.76	$1.10 @1.60
February 4	.78 @1.44	1.10 @1.60
February 21	.78 @1.44	.81 @1.76
May 22	1.00 @1.85	.81 @1.76

Cotton Valley

	Per barrel	
	1929.	1928.
January 1	$0.81 @1.71	$0.85 @ —
February 4	.81 @1.44	.85 @ —
February 6	.81 @1.44	.75 @ —
April 11	.81 @1.44	.75 @1.75
May 22	.85 @1.80	.75 @ —
July 30	.85 @1.80	.81 @1.76

Smackover
(Below 24 Degrees)

	Per barrel	
	1929.	1928.
January 1	$0.75	$0.85
February 6	.75	.75
May 22	.85	.75

Smackover
(24 Degrees and Above)

	Per barrel	
	1929.	1928.
January 1	$0.90	$1.00
February 6	.90	.90
May 22	1.00	.90

Stephens

	Per barrel	
	1929.	1928.
January 1	$0.75 @ .95	$1.00 @1.10
January 28	.70 @ .90	1.00 @1.10
May 22	.90 @1.10	1.00 @1.10

Urania

	Per barrel	
	1929.	1928.
January 1	$0.90	$0.90
April 22	1.00	.90
May 22	1.10	.90

Big Muddy

	Per barrel	
	1929.	1928.
January 1	$1.33	$1.25
May 21	1.43	1.25
July 27	1.43	1.33

Elk Basin

	Per barrel	
	1929.	1928.
January 1	$1.48	$1.33
May 21	1.65	1.33
July 27	1.65	1.48

Grass Creek (Light)

	Per barrel	
	1929.	1928.
January 1	$1.48	$1.33
May 21	1.65	1.33
July 27	1.65	1.48

Lance Creek

	Per barrel	
	1929.	1928.
January 1	$1.48	$1.33
May 21	1.68	1.33
July 27	1.68	1.48

Mule Creek

	Per barrel	
	1929.	1928.
January 1	$1.10	$1.10
May 21	1.20	1.10

Rock Creek

	Per barrel	
	1929.	1928.
January 1	$1.00	$1.25
May 21	1.40	1.25
July 27	1.40	1.33

Salt Creek
(29 Degrees to 29.9 Degrees)

	Per barrel	
	1929.	1928.
January 1	$0.95	$1.14
February 21	.95	1.01
May 21	1.10	1.01
July 27	1.10	.95

Salt Creek
(36 Degrees to 36.9 Degrees)

	Per barrel	
	1929.	1928.
January 1	$1.36	$1.28
February 21	1.36	1.34
May 21	1.45	1.34
July 27	1.45	1.36

Sunburst

	Per barrel	
	1929.	1928.
January 1	$1.65	$1.35
January 25	1.65	1.50
May 8	1.65	1.65
May 23	1.75	1.65

South, Central and Southwestern Texas
(Luling)

	Per barrel	
	1929.	1928.
January 1	$1.00	$1.00
January 11	.80	1.00

(Mirando)

	Per barrel	
	1929.	1928.
January 1	$1.00	$1.00
January 7	.80	1.00

(Salt Flat)

	Per barrel	
	1929.	1928.
January 1	$0.80	—
April 8	1.00	—

West Texas
(Glasscock and Howard Counties)

	Per barrel	
	1929.	1928.
January 1	$0.60 @ .80	$0.65 @ —
January 16	.70 @1.18	.60 @ .80
November 28	.70 @1.00	.60 @ .80

Oil Springs, Canada

	Per barrel	
	1929.	1928.
January 1	$2.07	$2.18
February 10	2.07	2.02
April 26	2.12	2.02
May 22	2.27	2.02

Petrolia, Canada

	Per barrel	
	1929.	1928.
January 1	$2.00	$2.11
February 10	2.00	1.95
April 26	2.05	1.95
May 22	2.20	1.95

Refinery Products: Record of Prices

(Tankcar Quotations at Refinery)

Gasoline and Naphtha

Pennsylvania
52-54 Gravity, Naphtha

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08	$0.07½	$0.10¼	$0.10¼
February	.08	.07½	.10¼	.10
March	.08¼	.07¾	.10	.09½
April	.08¾	.08	.09½	.09½
May	.09¼	.09	.09¾	.09¾
June	.10	.09¼	.10	.10
July	.10¼	.10¼	.10	.09½
August	.10¾	.10¼	.09½	.09
September	.11½	.11½	.09	.08¾
October	.11½	.10¾	.08¾	.08¾
November	.10¾	.10¾	.08¾	.08¾
December	.10¾	.10¼	.08¾	.08¾
Year	.11½	.07½	.10¼	.08¾

60-62 Gravity, S. R. Gasoline

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08¾	$0.08½	$0.11½	$0.11
February	.08¾	.08½	.10¾	.10¼
March	.08¾	.08½	.10¾	.10¼
April	.09½	.08½	.10¾	.10¾
May	.10½	.10	.10¾	.10¾
June	.11¼	.10¾	.10¾	.10¾
July	.11½	.11¼	.10¾	.09¾
August	.11½	.11½	.09¾	.09¼
September	.12½	.12½	.09¼	.09¼
October	.12½	.11½	.09	.08¼
November	.11½	.11½	.08¼	.08
December	.11½	.11¼	.08	.08
Year	.12¼	.08¼	.11¼	.08

64-66 Gravity, S. R. Gasoline

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09½	$0.08¾	$0.11¾	$0.11¾
February	.09	.08¾	.11⅝	.11½
March	.09¼	.09	.11½	.11⅝
April	.09¾	.09¼	.11½	.11½
May	.10½	.10	.11⅜	.11½
June	.11¼	.10⅝	.11⅞	.11⅞
July	.11⅜	.11½	.11⅞	.10
August	.11⅜	.11⅜	.10	.09½
September	.13	.13	.09½	.08¾
October	.13	.12¼	.09	.08¾
November	.12¼	.12¼	.09	.08¾
December	.12¼	.11⅜	.08¾	.08¾
Year	.13	.08¾	.11⅞	.08¼

Oklahoma

50@52, 450 End Point, Naphtha

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05½	$0.05½	$0.07	$0.07
February	.05½	.05½	.07	.06½
March	.05½	.05½	.06½	.06¾
April	.06⅜	.05½	.06⅞	.06¼
May	.07	.06⅜	.07¾	.06⅞
June	.07¼	.07	.08	.08
July	.08¼	.07¼	.08	.07¼
August	.08½	.08½	.07	.07
September	.09⅛	.09	.07¼	.06¾
October	.09	.09	.06½	.06½
November	.09	.08½	.06½	.06½
December	.08½	.07¼	.06½	.06¼
Year	.09⅛	.05½	.08	.06¼

58@60, 437 End Point Gasoline (U. S. Motor)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05⅝	$0.05½	$0.07¼	$0.07¼
February	.06	.05¾	.06⅝	.06¼
March	.06¼	.06	.06¾	.06½
April	.07	.06⅝	.07¾	.07⅛
May	.07⅜	.07	.08⅜	.07⅝
June	.07⅝	.07½	.09	.08½
July	.08⅝	.07¾	.08½	.07½
August	.09⅛	.09	.07¾	.07
September	.09⅝	.09⅛	.07¾	.06¾
October	.09¼	.09¼	.06¾	.06¾
November	.09	.08½	.06¾	.06¾
December	.08	.07½	.06¾	.06¼
Year	.09⅝	.05½	.09	.06¼

60@62, 400 End Point, Gasoline

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06¼	$0.06¼	$0.08	$0.07
February	.06½	.06⅜	.07¼	.07
March	.06½	.06⅜	.07¼	.07
April	.06⅞	.06½	.07⅝	.07¼
May	.07½	.07⅛	.08⅞	.07⅝
June	.07¾	.07⅝	.08¾	.08
July	.09¼	.08	.08¾	.07¾
August	.09⅝	.09⅝	.07¼	.07¼
September	.10⅛	.09¾	.07⅝	.07
October	.09¾	.09¾	.07⅝	.07⅜
November	.09⅝	.09⅜	.07⅝	.07⅜
December	.09¼	.08¾	.07¼	.06¾
Year	.10⅛	.06¼	.08⅞	.06¾

North Texas

56@58, 450 End Point, Naphtha

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05½	$0.05½	$0.07	$0.07
February	.05½	.05½	.06⅝	.06¼
March	.05½	.05½	.06⅝	.06⅜
April	.06½	.05½	.06¾	.06⅜
May	.07	.06½	.07¾	.06¾
June	.07¾	.07	.08	.08
July	.08½	.07⅝	.08	.07¼
August	.09¼	.08¾	.07¼	.07
September	.09¼	.09⅛	.07¼	.06½
October	.09¼	.09	.06½	.06½
November	.09	.08¼	.06½	.06½
December	.08¼	.07¼	.06½	.06⅜
Year	.09¼	.05½	.08	.06⅛

58@60, 437 End Point, Gasoline (U. S. Motor)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.05⅝	$0.05½	$0.07¼	$0.07¼
February	.06	.05¾	.06⅝	.06¼
March	.06¼	.06	.06¾	.06½
April	.07	.06⅝	.07¾	.07⅛
May	.07⅜	.07	.08⅜	.07⅝
June	.07⅝	.07½	.09	.08½
July	.08⅝	.07¾	.08½	.07½
August	.09⅛	.09	.07¾	.07
September	.09⅝	.09⅛	.07¾	.06¾
October	.09¼	.09¼	.06¾	.06¾
November	.09	.08½	.06¾	.06¾
December	.08	.07½	.06¾	.06¼
Year	.09⅝	.05½	.09	.06¼

Kerosene

Pennsylvania

45, Water White

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.06¾	$0.06¼	$0.07¾	$0.07¾
February	.06¼	.06¼	.07¼	.07¼
March	.06¼	.06¼	.07¼	.07¼
April	.06½	.06¼	.07¼	.07¼
May	.06¾	.06½	.07¼	.07
June	.06¾	.06¾	.07	.06⅞
July	.06⅝	.06¼	.06⅞	.06½
August	.06¼	.06¼	.06⅜	.06¼
September	.08	.07½	.06¼	.06¼
October	.08	.07⅝	.06½	.06¼
November	.07¼	.07⅝	.06¼	.06¼
December	.07⅝	.07½	.06	.06
Year	.08	.06½	.07¾	.06

47, Water White

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.07	$0.06⅞	$0.08¼	$0.08¼
February	.07	.07	.08¼	.08¼
March	.07	.07	.08¼	.08¼
April	.07¼	.07	.08¼	.08¼
May	.07½	.07¼	.08¼	.07⅝
June	.07⅝	.07½	.07⅝	.07¾
July	.07½	.07	.07¾	.07¼
August	.07¼	.07	.07¼	.06⅞
September	.08⅜	.08¼	.06⅞	.06⅞
October	.08⅜	.08⅜	.06⅞	.06⅞
November	.08¼	.08¼	.06⅞	.06⅞
December	.08¼	.08¼	.06¾	.06¾
Year	.08¾	.06⅞	.08¼	.06¾

Oklahoma

41@43, Water White

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04⅛	$0.04	$0.05¼	$0.05
February	.04	.04	.05⅜	.05
March	.04¼	.04	.06	.05¼
April	.04⅞	.04⅜	.06¼	.06¼
May	.05¼	.05	.06¾	.05½
June	.05¼	.04⅝	.05⅞	.05¾
July	.05	.04¼	.05⅜	.05
August	.06¼	.05¼	.05	.05
September	.06⅜	.06¼	.05½	.05
October	.06¼	.05⅜	.05	.04⅜
November	.05⅝	.05½	.04½	.04½
December	.05⅜	.05¼	.04½	.04¼
Year	.06⅜	.04	.06½	.04¼

North Texas

41@43, Water White

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04⅛	$0.04	$0.05¼	$0.05
February	.04	.04	.05½	.05¼
March	.04¼	.04	.05⅞	.05½
April	.04⅞	.04½	.06½	.06¼
May	.05	.05	.06¼	.05½
June	.04⅞	.04½	.05¾	.05½
July	.05	.04⅝	.05	.05
August	.06¼	.05½	.05	.05
September	.06⅜	.06	.05	.04¼
October	.05¾	.05⅝	.04¼	.04¼
November	.05½	.05½	.04¼	.04¼
December	.05⅜	.05¼	.04¼	.04⅛
Year	.06⅜	.04	.06½	.04⅛

Fuel and Gas Oils

Pennsylvania

36@40, Fuel Oil

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.04⅝	$0.04⅜	$0.05	$0.05
February	.04¾	.04⅝	.05	.05
March	.05	.04¾	.05	.05
April	.05	.05	.05⅛	.05
May	.05	.05	.05⅛	.05⅛
June	.05¼	.05	.05⅛	.05
July	.05	.05	.05⅜	.05
August	.05	.04¾	.05	.05
September	.04⅞	.04¾	.05	.05
October	.04¾	.04¾	.05	.05¼
November	.04¾	.04¾	.05⅜	.05¼
December	.05	.04¾	.05¼	.05¼
Year	.05¼	.04⅜	.05¾	.05

Oklahoma

22@26, Fuel Oil

Per barrel

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.75	$0.72½	$0.55	$0.55
February	.87½	.77½	.57	.55
March	.87½	.85	.62½	.62½
April	.82½	.82½	.62½	.62½
May	.75	.75	.62½	.55
June	.75	.62½	.55	.55
July	.62½	.57½	.60	.55
August	.57½	.77½	.60	.60
September	.60	.60	.65	.60
October	.60	.60	.70	.65
November	.60	.55	.75	.70
December	.55	.55	.90	.80
Year	.87½	.55	.90	.55

32@36, Gas Oil

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.02½	$0.02¼	$0.02⅜	$0.02½
February	.02⅛	.02½	.02¾	.02¾
March	.02½	.02½	.03	.03
April	.02½	.02½	.03	.03
May	.02½	.02½	.03	.02⅝
June	.02½	.02⅜	.02⅝	.02⅜
July	.02⅝	.02⅜	.02⅝	.02⅜
August	.02⅜	.02⅜	.02⅝	.02⅜
September	.02⅜	.02⅜	.02⅝	.02⅝
October	.02⅝	.02⅜	.02⅝	.02⅝
November	.02⅜	.02⅜	.03	.02¾
December	.02½	.02⅜	.02⅞	.02¾
Year	.02⅜	.02¼	.03	.02⅝

North Texas

24@26, Fuel Oil

Per barrel

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.70	$0.67½	$0.55	$0.55
February	.72½	.67½	.55	.55
March	.72½	.72½	.70	.60
April	.72½	.72½	.70	.70
May	.70	.70	.70	.70
June	.70	.60	.65	.60
July	.60	.60	.60	.60
August	.60	.60	.60	.60
September	.60	.60	.65	.60
October	.60	.60	.70	.65
November	.60	.55	.70	.70
December	.55	.55	.70	.70
Year	.72½	.55	.70	.55

32@36, Gas Oil

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.02⅝	$0.02¼	$0.02⅜	$0.02⅜
February	.02⅜	.02⅜	.02¾	.02⅜
March	.02⅜	.02⅜	.03⅛	.03
April	.02⅜	.02⅜	.03	.03
May	.02½	.02⅜	.03	.02¼
June	.02¼	.02¼	.02¼	.02¼
July	.02¼	.02¼	.02¼	.02¼
August	.02¼	.02¼	.02¼	.02¼
September	.02¼	.02¼	.03	.02⅜
October	.02½	.02¼	.02¾	.02¼
November	.02⅜	.02¼	.03	.02⅜
December	.02⅜	.02⅜	.02⅞	.02¼
Year	.02½	.02⅛	.02⅞	.02¼

Lubricating Oils

Pennsylvania

Neutral Oil

200 Vis., No. 3 Color

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.33¼	$0.33	$0.29	$0.29
February	.33¼	.32	.29	.29
March	.33¼	.32	.29	.29
April	.33¼	.33¼	.29	.29
May	.33¼	.33¼	.29	.29
June	.33¼	.33¼	.29	.29
July	.33¼	.33¼	.28	.28
August	.33¼	.33	.28	.28
September	.33	.31½	.28	.27¼
October	.31½	.30	.27¼	.27¼
November	.29½	.29	.27¼	.27¼
December	.29	.29	.27¼	.27¼
Year	.33¼	.29	.29	.27¼

Cylinder Stock

600, Steam Refined

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¾	$0.09¼	$0.23	$0.23
February	.09¼	.09	.23	.22½
March	.09	.09	.22½	.22½
April	.09¼	.09¼	.24½	.23
May	.09¾	.09½	.25½	.25½
June	.10½	.09¾	.25½	.25½
July	.11¾	.11	.28	.27¾
August	.12½	.12	.27½	.27½
September	.13½	.13	.27	.27
October	.13½	.13½	.27½	.27
November	.15½	.14	.27½	.27½
December	.23¼	.15½	.27½	.27½
Year	.23¼	.09	.28	.22½

South Texas

Neutral Oil

200 Vis., No. 3 Color

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09	$0.08½	$0.10¼	$0.10¼
February	.09	.09	.10¼	.10¼
March	.09	.08	.10¼	.10¼
April	.08½	.08	.10¼	.10¼
May	.08½	.08½	.10¼	.10¼
June	.10	.08½	.10¼	.10¼
July	.10	.10	.09	.09
August	.10¼	.10	.09	.09
September	.10¼	.10¼	.09	.09
October	.10¼	.10¼	.09	.09
November	.10¼	.10¼	.09	.09
December	.10¼	.10¼	.09	.09
Year	.10¼	.08	.10¼	.09

Oklahoma

Neutral Oil

200 Vis., No. 3 Color

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.10⅜	$0.10⅜	$0.09½	$0.09½
February	.10⅜	.10⅜	.09½	.09½
March	.10⅜	.10⅜	.09½	.09½
April	.10⅜	.10⅜	.09⅜	.09½
May	.10⅜	.10⅜	.09⅜	.09⅜
June	.10⅜	.10⅜	.09⅜	.09⅜
July	.10⅜	.10⅜	.09⅜	.09⅜
August	.10⅜	.10⅜	.09⅜	.09⅜
September	.10⅜	.10⅜	.09⅜	.09⅜
October	.10⅜	.10⅜	.09¾	.09⅜
November	.10⅜	.10⅜	.09⅜	.09⅜
December	.09½	.09½	.09⅜	.09⅜
Year	.10⅜	.09½	.09⅜	.09½

Paraffin Wax

Pennsylvania

122@124, White, Crude, Scale

Per pound

	1928. H.	1928. L.	1929.* H.	1929.* L.
January	$0.02⅞	$0.02⅞	$0.05⅛	$0.05⅛
February	.03¼	.03	.05	.05
March	.03¼	.03⅛	.03¾	.03¾
April	.03¼	.03⅛	.03⅝	.03¾
May	.03¼	.03¼	.03½	.03⅛
June	.03¼	.03¼	.03	.02⅞
July	.03¾	.03¾	.02¾	.02¾
August	.04	.03¾	.03	.03
September	.05	.04	.03¼	.03¼
October	.05	.05	.03½	.03⅝
November	.05⅛	.05⅛	.03⅛	.03⅛
December	.05⅛	.03⅝	.03⅛	.03¼
Year	.05⅛	.02⅞	.05⅛	.02⅞

* Prices beginning March, 1929, are on a delivered basis.

Oklahoma

122@124, White, Crude, Scale

Per pound

	1928. H.	1928. L.	1929. H.	1929. L.
January	2$0.02⅝	$0.02½	$0.04⅞	$0.04⅞
February	.02⅝	.02½	.04⅝	.04⅝
March	.02¾	.02⅝	.04⅝	.03½
April	.02⅞	.02¾	.03½	.03¼
May	.03⅛	.02⅞	.03¼	.03
June	.04	.03⅛	.03	.02½
July	.04	.04	.02½	.02½
August	.04	.04	.02½	.02½
September	.04⅞	.04	.02¾	.02½
October	.05	.05	.02⅝	.02⅝
November	.05	.05	.02⅝	.02⅝
December	.05	.04⅞	.02⅝	.02⅝
Year	.05	.02½	.04⅞	.02½

Export Quotations

North Atlantic Ports

Gasoline and Naphtha

Navy Gasoline, Bulk

(58-60 deg., 437 endpoint)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08½	$0.08¼	$0.10¼	$0.10
February	.09½	.08½	.09½	.09½
March	.10	.09¾	.09½	.09½
April	.10	.09¾	.09	.09
May	.10	.10	.09	.09
June	.11	.10½	.09	.09
July	.12	.11	.09	.09
August	.12	.12	.09	.09
September	.12	.11¾	.09	.09
October	.11½	.11	.09	.09
November	.10¾	.10¾	.09	.09
December	.10¾	.10¾	.09	.09
Year	.12	.08¼	.10¼	.09

Navy Gasoline, Cases

58-60 deg., 437 endpoint)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.2390	$0.2365	$0.2640	$0.2640
February	.2365	.2365	.2640	.2640
March	.2465	.2365	.2640	.2640
April	.2540	.2490	.2640	.2640
May	.2540	.2540	.2640	.2640
June	.2590	.2540	.2640	.2640
July	.2690	.2590	.2640	.2640
August	.2690	.2690	.2640	.2640
September	.2690	.2690	.2640	.2640
October	.2690	.2640	.2640	.2640
November	.2640	.2640	.2640	.2640
December	.2640	.2640	.2640	.2640
Year	.2690	.2365	.2640	.2640

Naphtha, Bulk

(61-63 degrees)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¼	$0.09	$0.11¼	$0.11¼
February	.09	.09	.11½	.11½
March	.10	.09	.11	.10½
April	.10½	.10½	.10¼	.10¼
May	.10½	.10½	.10¼	.10¼
June	.11½	.11	.10¼	.10¼
July	.12¼	.11½	.10	.10
August	.13	.13	.10	.10
September	.13	.12¾	.10	.10
October	.12½	.12	.10	.10
November	.11¾	.11¾	.10	.10
December	.11¾	.11⅝	.10	.10
Year	.13	.09	.11½	.10

Naphtha, Bulk

(64-66-degrees)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.09¾	$0.09½	$0.11¾	$0.11
February	.09½	.09½	.11	.11
March	.10	.09	.11	.10½
April	.11	.10¾	.10½	.10½
May	.11	.11	.10½	.10½
June	.12	.11½	.10½	.10½
July	.13	.12	.10¼	.10¼
August	.13½	.13½	.10¼	.10¼
September	.13½	.13¼	.10¼	.10¼
October	.13½	.12¾	.10¼	.10¼
November	.12¼	.12¼	.10¼	.10¼
December	.12¼	.12¼	.10¼	.10¼
Year	.13½	.09	.11¾	.10¼

Naphtha, Bulk

(66-68 degrees)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.12¾	$0.12½	$0.14¾	$0.14¼
February	.12½	.12½	.14	.14
March	.13½	.12½	.14	.13
April	.14	.13¾	.13	.12½
May	.14	.14	.12½	.12½
June	.15	.14½	.12½	.12½
July	.16	.15	.12½	.12½
August	.16½	.16½	.12½	.12½
September	.16½	.16¼	.12½	.12½
October	.16	.15½	.12½	.12½
November	.15¼	.15¼	.12½	.12½
December	.15¼	.15¼	.12½	.12½
Year	.16½	.12½	.14¾	.12½

Kerosene

Standard White, Bulk

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.07	$0.06¾	$0.07¾	$0.07½
February	.06¾	.06¾	.07¾	.07¾
March	.07	.06¾	.08⅛	.07¾
April	.07¾	.07	.08⅜	.08⅛
May	.07¾	.07¾	.08	.08
June	.07¾	.07¾	.08	.08
July	.07¾	.07¾	.08	.07
August	.07½	.07¾	.07	.07
September	.07¾	.07¾	.07	.07
October	.07¾	.07¾	.08	.07
November	.07¾	.07¾	.08	.08
December	.07¾	.07¾	.08	.08
Year	.07¾	.06¾	.08¾	.07

Standard White, Cases

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1715	$0.1690	$0.1765	$0.1765
February	.1690	.1690	.1765	.1765
March	.1690	.1690	.1765	.1756
April	.1740	.1690	.1765	.1765
May	.1740	.1740	.1765	.1765
June	.1740	.1740	.1765	.1765
July	.1740	.1715	.1765	.1765
August	.1740	.1715	.1765	.1765
September	.1740	.1740	.1765	.1765
October	.1765	.1740	.1765	.1765
November	.1765	.1765	.1765	.1765
December	.1765	.1765	.1765	.1765
Year	.1765	.1690	.1765	.1765

Water White, Bulk

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08	$0.07¾	$0.09	$0.08½
February	.07¾	.07¾	.08¾	.08¾
March	.08	.07¾	.09¾	.08¾
April	.08¾	.08	.09¾	.09¾
May	.08¾	.08¾	.08¾	.08¾
June	.08¾	.08¾	.08¾	.08¾
July	.08¾	.08¾	.09¾	.08
August	.09	.08¾	.08	.08
September	.09	.08¾	.08	.07¾
October	.09	.09	.09	.08
November	.08¾	.08¾	.09	.09
December	.08¾	.08¾	.09	.09
Year	.09	.07¾	.09¾	.07¾

Water White, Cases

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.1815	$0.1790	$0.1890	$0.1890
February	.1790	.1790	.1890	.1890
March	.1790	.1790	.1890	.1890
April	.1840	.1790	.1890	.1890
May	.1840	.1840	.1890	.1890
June	.1840	.1840	.1800	.1800
July	.1840	.1815	.1800	.1800
August	.1865	.1815	.1800	.1800
September	.1865	.1865	.1800	.1800
October	.1890	.1865	.1800	.1800
November	.1890	.1890	.1800	.1800
December	.1890	.1890	.1800	.1800
Year	.1890	.1790	.1890	.1800

Gulf Ports

Gasoline and Naphtha

Navy Gasoline, Bulk

(58-60 deg., 437 endpoint)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.07½	$0.07	$0.08½	$0.08⅛
February	.07⅛	.07	.08½	.08½
March	.07⅞	.07⅛	.08½	.08½
April	.08⅝	.08½	.08½	.08½
May	.08⅞	.08¾	.08½	.08½
June	.09¼	.08⅝	.08½	.08½
July	.10⅛	.09⅜	.08½	.08½
August	.10¼	.10⅛	.08⅜	.08⅜
September	.10¼	.10	.08½	.08½
October	.09⅝	.09⅜	.08½	.08½
November	.09½	.09⅜	.08½	.08½
December	.09½	.08⅜	.08½	.08½
Year	.10¼	.07	.08½	.08⅛

Naphtha, Bulk

(60-62 deg., 390 endpoint)

	1928. H.	1928. L.	1929. H.	1929. L.
January	$0.08½	$0.08	$0.10¼	$0.09⅝
February	.08½	.08	.09¾	.09¾
March	.08¾	.08½	.09¾	.09¾
April	.09¼	.08⅞	.09¾	.09¼
May	.09⅜	.09¼	.09¾	.09¾
June	.09¾	.09⅜	.09¾	.09¾
July	.11⅛	.09⅞	.09¾	.09¾
August	.11½	.11½	.09¾	.09¾
September	.11½	.11⅜	.09¾	.09¾
October	.11	.10¾	.09¾	.09¾
November	.11	.10⅞	.09¾	.09¾
December	.11	.10½	.09¾	.09¾
Year	.11½	.08	.10¼	.09⅝

(Continued on page 109)

Fertilizer Materials: Market Review

Although progressive accomplishments in the matter of consumer education were listed as outstanding attainments in 1929, the strengthening market position noted for fertilizer crudes during the closing months of 1929 was liquidated and taken generally, the fertilizer trade was economically less fortunate than a year ago. Although purchasing during the first half of the year was fairly active, it was the absence of business during the final six months that was responsible for a probable loss in total consumption and a downward curve of prices.

It will be remembered that the strengthening movement noted during the closing months of 1928 did not offset the sentiment for caution over the condition of the trade during 1929. This feeling was fully justified last year, due to high money rates, relatively poor returns from crops, low-priced cotton and a serious drought throughout the spring and summer. Again last year the prevalence of high money rates caused the failure of several banks in the cotton belt and coupled with the speculative urge of 1929, money was not very fluid. The establishment of a Federal subsidy as a boom to crop prices has not materially made itself felt as yet and with the exception of cotton and wheat, would probably not reflect to a point of recognition until later this year. The drought was a very adverse factor last year and from local opinions its effects will again be felt in 1930.

Mounting production of Chilean nitrate of soda and the steady progress of the development of synthetic nitrogen products both in this country and abroad forced the market for the former into a lower position last year. While synthetic nitrate of soda production in this country has only reached a point estimated at one-seventh of the capacity planned, it has become a reckoning market factor and together with developments in both cost and consumption of sulphate of ammonia exercised an increased volume of pressure against the Chilean market.

In itself, however, the Chilean position was marked with constructive improvement last year. The centralized selling plan was again utilized, there was further untilization of manufacturing, a restriction on production planned for 1930, and, the reduction of costs through the exploitation of the Guggenheim process of manufacture were among the important developments of the year just completed. The use of processed nitrate was widely increased last year, and it was known that at least one other manufacturer was planning to introduce a similar product this year.

An extensive educational campaign conducted by the local agency for the German and French potash producers created a wider use of potash salts last year. Prices for the 1929-30 season were somewhat higher than the previous year. American potash and also the Spanish product was no more a market factor than in the previous year; in fact, there were no reported offerings of the former in the East.

The animal ammoniate group continued on its indicated course of becoming more as an item of use in feeds rather than for fertilizers. The high scale of prices in former years has been out of line for the fertilizer manufacturers, considering the relatively low price for mixed goods, but the descending prices for practically the entire group in 1929 has placed these materials in a more advantageous position for sale through fertilizer channels. As in the case of most natural products, however, increased use would result in a recovery in prices.

The menhaden catch off the Atlantic coast was larger last summer, but was not voluminous as to cause the sharp reduction in prices that occurred. It was rather the dragging demand, which did not absorb the available supply until into January this year, that forced the downward precipitation of market values.

Low prices in the domestic market caused a diminished sale of some foreign synthetics in this market over the past year. The impending tariff bill held a provision for abolishing the tariff on imported fertilizer materials and from the sentiment expressed in Congress it was most likely that this proviso would remain when the bill came up for final consideration.

Mixed fertilizer prices held fair until the fall season. The absence of business caused open cutting, particularly in the West. Prices in the South were lower mainly due to lower priced crudes, and the general condition of the trade in plant foods was such as to cause one of the leading mixers to seek additional lines of endeavor for further revenue.

For the calendar year 1929 total fertilizer tag sales in fifteen cotton producing States showed an increase of 0.2 percent over 1928 sales. For the thirteen Southern States, however, a decrease of 1.2 percent occurred for the year. In the fifteen States, the total increase in tonnage during the year just completed was only 12,000 tons, but from the records of tag sales in these States it seems likely to the National Fertilizer Association that the total sale of fertilizers in the United States during 1929 was somewhat larger than any previous year. Decreased sales occurred in all States from Virginia to Tennessee, Mississippi and Missouri inclusive; Arkansas, Louisiana, Texas, Oklahoma, Indiana and Illinois showed large increases.

Fertilizer sales as indicated by the sales of tax tags* during the calendar years 1924 to 1929, inclusive, in short tons, were as follows:—

	Percent.†	1929.	1928.	1927.	1926.	1925.	1924.
Virginia‡	98.2	429,886	437,709	408,008	435,223	451,656	441,895
North Carolina	95.9	1,293,573	1,349,360	1,171,499	1,218,176	1,217,822	1,183,053
South Carolina‡	96.4	760,053	788,293	726,736	840,128	873,255	844,440
Georgia	98.4	868,911	883,274	713,047	780,302	778,808	678,959
Florida‡	88.9	416,885	468,907	417,438	398,480	358 463	365,317
Alabama	99.1	675,150	681,100	478,400	615,364	598,115	456,840
Mississippi	98.3	327,806	333,350	218,750	278,075	258,028	200,122
Tennessee‡	94.7	142,745	150,726	112,473	156,336	142,174	115,230
Missouri	90.7	58,891	64,922	56,100	56,891	63,939	47,121
Arkansas‡	123.9	156,582	126,391	75,487	126,175	123,387	96,750
Louisiana‡	121.3	174,278	143,693	92,806	114,347	110,784	124,668
Texas‡	132.9	192,133	144,643	80,521	125,150	101,008	127,791
Oklahoma	169.0	14,045	8,203	¶4,263	¶5,418	¶5,000	¶4,000
Indiana**	128.9	288,380	223,772	239,852	223,944	226,148	192,417
Illinois	155.7	52,584	33,774	26,000	25,227	24,582	17,527
Totals, South	98.8	5,510,938	5,580,571	4,555,588	5,150,065	5,082,439	4,692,186
Grand totals	100.2	5,851,902	5,838,117	4,821,440	5,399,236	5,333,169	4,902,130

* Monthly records of sales of tags are kept by State control officials and are usually slightly larger or smaller than the actual sales of fertilizer.
† Percent 1929 was of 1928.
‡ Cottonseed meal sold as fertilizer included.
¶ Estimated by State authorities for fiscal year ended June 30.
** The figures for Indiana prior to 1926 were based on fertilizer sales; 1926-1929 figures represent tag sales.

The Nitrate Situation

The status of the nitrogen industry with particular reference to Chilean nitrate of soda and a comprehensive analysis of opinion at London are fully covered in Aikman's annual report, dated December 31, which follows:—

There is no particular feature to record in the nitrogen industry during the past six months. A more general realization of the fact stated in June in this report, that an increase of about 25 percent in consumption would be needed to absorb the year's probable increase in production, coupled with the American financial crisis and a general fall in agricultural products, has produced a rather less optimistic tendency. It is, however, too early to form an opinion as to what proportion of the increase will be absorbed, but both the general financial situation and the price of agricultural products show a tendency to imprové, and the lower price basis on which all forms of nitrogen are being sold should give impetus to an increased consumption. There appears to be no reason to amend the estimated world production of pure nitrogen, July, 1929, to June, 1930, of 2,365,000 tons given previously, but a very cursory glance at the situation shows the urgent necessity of a general and substantial restriction in the production of nitrogen at any rate until such time as consumption can be more closely gauged. It is satisfactory that the Chilean government has already taken a lead in this matter and at their instigation a scheme to restrict the production of nitrate of soda is being put into operation. Further negotiations have been taking place between Continental interests during recent months with a view to making the existing nitrogen agreement more comprehensive, and it is just announced that an agreement has been reached between the I. G. Farbenindustrie and the principal producers in the Ruhr.

The following is a comparison of the figures for the six months ending December 31, 1913, 1926, 1927, 1928 and 1929, and the nitrate years ending June 30, 1914, 1927, 1928 and 1929:—

	Tons				
	1913-14.	1926-27.	1927-28	1928-29.	1929-30.
Deliveries in Europe and Egypt for six months ending December 31	490,000	296,500	311,000	355.000	397.000
Deliveries in Europe and Egypt for twelve months ending June 30	1,984,000	917,500	1,315,000	1,486,000	.....
Deliveries in United States for six months ending December 31	258.000	206,000	305.000	240,000	137.000
Deliveries in United States for twelve months ending June 30	553,000	673.500	995.000	975,000	.....
Deliveries in other countries for six months ending December 31	45,000	96,000	113,000	100,000	102,000
Deliveries in other countries for twelve months ending June 30	92,000	162,000	208,000	232.000	.....
Shipments to Europe and Egypt for six months ending December 31	1,194,000	300.000	984,000	972,000	953,000
Shipments to Europe and Egypt for twelve months ending June 30	2.025.000	737,000	1,540.000	1,703.000	.....
Shipments to United States for six months ending December 31	236.000	279.000	387,000	335,000	292.000
Shipments to United States for twelve months ending June 30	547,000	614.000	1,072,000	990,000	.....
Shipments to other countries for six months ending December 31	46,000	102,000	130,000	123,000	121,000
Shipments to other countries for twelve months ending June 30	87,000	169,000	213,000	221.000	.....
Production in Chile for six months ending December 31	1,367,000	737.000	1,028,000	1,635,000	*1,575,000
Production in Chile for twelve months ending June 30	2,822,000	1,297,000	2,507,000	3,228 000	.....
Visible supply for Europe and Egypt December 31	1,098,000	328,000	803,000	956,500	*1,090,500
Visible supply for United States December 31	71.000	192,000	130,500	206 000	*275.000
Visible supply for other countries December 31	18.000	25.000	43.000	54,000	*39.000
Stocks in Chile December 31	498,000	1,274,000	519,000	874,000	*1,150,000
Total supply in sight December 31	1,685,000	1,819,000	1,495,500	2,090,500	*2,554,500

* Estimating production in December at 200,000 tons, and shipments at 150,000 tons to Europe and Egypt, 60,000 tons to the United States, and 10,000 tons to other countries.

It is unusually difficult to form an accurate estimate of the prospects of consumption for nitrate of soda during the next six months. A study of the figures given below show that the deliveries in all countries have increased as compared with last year, except in the United Kingdom and Spain, business in the latter country being rendered difficult by the fluctuations and depreciation in the currency. The total increased deliveries for Europe and Egypt amount to 42,000 tons.

The eventual result of the next six months largely depends on the tendency of the market for competitive articles, the price of agricultural products and the general financial conditions ruling during the active period of consumption.

As regards the United States, the smaller deliveries July-December are due to a decreased demand from industrial consumers possibly explained by dear money deterring buyers from anticipating their requirements. The prospects of consumption during the next six months which covers the agricultural demand are considered favorable.

Production Cost and Centralized Selling

The new system of centralized selling initiated July 1 has continued in operation and no change of any importance has been made. Sales amount to date to the satisfactory total of about 1,000,000 tons and prices have been maintained.

It is impossible at the moment to generalize in regard to costs of production. In some of the less favorably placed oficinas costs have shown a tendency to rise but in general there is little change and there are individual cases of companies who have been able to show improved results during the past six months. The low rates of freight at which nitrate has been carried to European consuming markets this season has been a favorable feature for producers.

Restriction of Production

A scheme for restricting production has been inaugurated to operate from February 1, 1930. Its object is to achieve a maximum reduction of about 20 percent per annum by the voluntary cessation of production in those oficinas where the cost is high. The reduction envisaged will bring production more into line with estimated consumption, and already producers representing about 13 percent of the present output are understood to have signified their intention to suspend production.

Freights

During the early part of the year rates were high, charters being concluded at 29s. 6d. down to 26s. 6d., and liner space fetched 30s. down to 25s. per ton. There was then a drop in the market and subsequently liner space was secured at 20s. down to 17s. 6d., and although few charters for tramp tonnage were effected, rates remained at about basis 26s. per ton.

Charter rates during the early period of the second half of the year remained steady at around 25s. to 27s. per ton and for a time liner rates improved slightly, 20s. to 22s. 6d. being paid. During the last few months a complete break in liner and charter rates has taken place, liner rates dropping to 14s. and charters have been effected at 20s. per ton. The year closes with rates showing practically no improvement from the lowest quotations.

Nitrate of Soda

Chilean nitrate of soda prices were much lower in 1929 than in the preceding year. There was a difference of almost 10 percent in the high figures for the years 1929 and 1928, and the highest price last year was more than 20 percent below the peak figure for 1927.

While in the past it has been the Chilean policy to regard the American market as more or less independent from the economic influences that govern nitrate of soda prices in the world market, mounting production and increasing competition from synthetic nitrogen has prompted a drive for wider agricultural use of this product and lower prices was chosen as one logical agency for this desire. Reduced costs as the result of unitization of the producing factors and the exploitation of material manufactured under the Guggenheim process were also allied in creating the reduced market, and another factor to be considered was the substantially reduced price and the increased use of American sulphate of ammonia, together with increasing competition from other fertilizers.

As usual, high prices reigned over the first five months of the year, but even during this period of activity prices were considerably below the levels during the so-called spot season of 1928. Prices varying from $2.17½ to $2.22½ per 100 pounds were obtained during this period, but the market eased off correspondingly with the withdrawal of demands, and when the time came for drafting the schedule for the fertilizer season of 1929-1930 prices were remarkably lower, having been based at $2.07 per 100 pounds. The schedule was arranged for regular monthly advances during the Fall, and the market closed at $2.12 per 100 pounds for December shipment.

Again last year high money rates prevailing in the cotton belt, particularly at planting time in April, and also during the dressing periods, hindered consumption last year. Cotton prices were at a relatively low level throughout the year, and the carryover of nitrate of soda stocks from the previous year was more than normal, as partly indicated by a visible supply of 206,000 tons in the United States at the close of 1928, compared with 130.500 tons at the close of the preceding year. The estimated visible supply at the close of 1929 was 275,000 tons.

Also due to high money rates, the re-sale market was not as reckoning a factor last year as in previous seasons. While miscalculated requirements left some users with excess stocks, there was less speculation, in hopes for higher prices during the Spring season.

According to estimates made at Valparaiso, production of Chilean nitrate of soda during the calendar year of 1929 amounted to 3,172,627 tons, compared with 3,099,647 tons during 1928. World supply at the end of 1929 was estimated at 2,554,500 metric tons, or about 500,000 metric tons above 1928, and more than 1,000,000 tons over the supply at the close of 1928.

The relative position of manufactured nitrates and Chilean nitrate during the past six years is shown bv the following tabulation compiled by the British Sulphate of Ammonia Federation:—

	Metric tons	
	Manufactured nitrates.	Chilean.
1923-24	719.000	340.000
1924-25	786,800	363.000
1925-26	934,300	324,200
1926-27	1,037 500	275,200
1927-28	1,250.700	391,300
1928-29	1,453,000	419,000

From 1923-24 to 1926-27 the consumption of manufactured nitrogen increased by 44 percent, while the consumption of Chilean nitrate of soda actually declined 19 percent, and from 1923-24 to 1928-29 consumption of manufactured nitrogen increased by 102 percent as compared to an increase of 23 percent for Chilean nitrate of soda.

It is interesting to note from these figures that consumption of manufactured nitrates during the 1928-29 season showed only a normal growth of about 200,000 metric tons, notwithstanding the commercial inauguration of synthetic production in the United States during that period. The status of the latter project was little different from the close of the previous year, with only one of the seven proposed units of manufacture believed to be in operation.

Ammoniates

Prices for practically every commodity listed in the ammoniate group were lower in 1929 than in the previous year. In this respect, the feature and perhaps the most instrumental figure in the reduced position of the general market was domestic sulphate of ammonia. In marked contrast with its tight position of 1928, when the time came for booking contracts to extend over the 1929-1930 season, the domestic market was sharply down, not only as a measure to further exclude foreign sulphate of ammonia from being a reckoning market factor, but also in significance of closer competition with nitrate of soda.

The market for the domestic product carried itself very firmly through the spot buying period during the

opening quarter of the year. In the two months to follow, little business was done both at re-sale and firsthand markets and such prices that ruled were mainly nominal. In the Summer leading sellers announced their readiness to accept contracts for the new fertilizer season and posted price of $2.05 per 100 pounds for bulk quantities to apply in monthly deliveries on eleven month contracts. This figure represented the lowest market price for this commodity since prior to the World War. In addition, prices for seven-month contracts were named at $2.10 per 100 pounds and prices for four-month contracts were offered at $2.20 per 100 pounds. Heavy bookings were reported to have been made at this basis and, although low prices existed during the opening few weeks of the new year, the producers were prepared to enter the Spring season in a fundamentally sound position and anticipated wider use of this product over the coming year.

While the export market lacked the briskness of previous years and also was subject to disturbing elements, the volume of sale through this outlet was materially increased over 1928. Exports during the first eleven months of the year totaled 125,097 tons, compared with only 89,091 tons during the corresponding period of 1928. Japan, Cuba and the Philippine Islands were the leading consumers, the former having doubled their consumption of American sulphate despite a rather heavy carryover from the preceding year. Exports to Cuba were almost four times as much as in 1928 and the increase to the Philippines was substantial, too.

Prices for this division of the trade were subject to competitive effects. The apparent move toward exclusion of German synthetic material as an influential market factor here—imports up to December were only about 50 percent of the 1928 total—diverted the previously existing competition on this commodity to foreign markets, particularly Japan, and the outlook for 1930 was encouraging for the foreign buyer. The high price for the year for export in double bags was $2.35 and figures named at the closing of the year at $2 per 100 pounds represented the low record, which was 35c. per 100 pounds below the low level of the previous year.

To meet the reduced prices for Chilean nitrate of soda and others included in the inorganic ammoniate group, importers of foreign synthetics lowered the schedule for ammonia sulphate-nitrate both in the Northern and Southern markets last year. The high for the year just ended was $62.20 per ton in the North and the low figure was $52 per ton, compared with a high of $62.75 and a low of $56.45 per ton in 1928. The opening of the year found a prescribed advance in price to continue the schedule named by the sellers in July, 1928, and a second advance occurred in February, bringing the market to its high point for the year of $62.20 per ton. This price prevailed through June. The new schedule was posted in July and was based at $52 per ton and followed the manner usually employed in quoting this ammoniate with respect to a regular monthly advance in the price, making it more lucrative to the buyer to purchase in the Summer months. Despite an extensive educational campaign conducted by the sellers here, this product was forced out of its previous competitive position due to prevailing low prices for other ammoniates and only 15,456 tons were imported during the first eleven months of 1929, compared with 83,287 tons during a like period of the preceding year.

Throughout the entire year of 1929 the price of dried blood in the local market was well below the ruling figures of the preceding year, but notwithstanding the reduced prices fertilizer mixers did not consume very much of this ammoniate and the major portion of the production was utilized for stock and poultry feeding purposes. The high market price for dried blood in New York, with 15-17 percent ammonia content, was $4.70 per unit, which represented the reigning market at the opening of the year and which was precipitated downward, finally reaching $3.85 per unit at the close of December. This figure was the lowest price quoted for blood stocks in this market since prices touched the $3.75 per unit level for a short period in January, 1927. The high and low figures for the year 1928 were $5.10 and $4.65, respectively. While imported blood continued as a potent market factor, its position did not show any material gain over the previous year. Prices for this variety were somewhat lower than in 1928, but were generally from 10c. to 25c. per unit above the prices asked by the domestic sellers. Only a small margin of 39 tons separated the total amount of imports received in this country during the first eleven months of 1928 and 1929. Total imports in 1928 were 8,808 tons to December and 8,847 tons in the corresponding period of 1929.

The trend of prices in the hoof meal market was an irregular one, by comparison with the position in 1928.

Nitrate Deliveries and Stocks in Europe and Egypt

Deliveries.	United Kingdom.	France.	Belgium.	Holland.	Spain and Portugal.	Italy.	Scandinavia.	Egypt.	Other European countries.	Total.
July-December, 1913	46,000	42,000	80,000	19,000	6,000	6,000	.....	29,000	262,000	490,000
July, 1913-June, 1914	123,000	350,000	205,000	100,000	50,000	65,000	76,000	55,000	960,000	1,984,000
July-December, 1926	14,000	52,500	27,000	18,500	25,500	10,000	4,500	116,000	28,500	296,500
July, 1926-June, 1927	51,000	237,500	86,500	88,000	108,000	43,500	49,000	154,500	99,500	917,500
July-December, 1927	26,500	31,000	15,500	15,500	35,000	7,500	1,000	113,000	66,000	311,000
July, 1927-June, 1928	70,500	307,000	123,500	128,000	137,000	62,500	64,000	177,000	245,500	1,315,000
July-December, 1928	25,500	67,000	29,500	28,000	36,000	12,500	3,000	94,500	59,000	355,000
July, 1928-June, 1929	73,000	393,500	143,000	137,000	143,000	73,500	69,500	179,000	274,500	1,486,000
July-December, 1929	16,500	78,500	30,500	48,000	22,000	17,500	3,500	114,000	66,500	397,000
Stocks.										
December 31, 1913	42,000	107,000	97,000	13,000	3,000	8,000	.....	.....	106,000	376,000
December 31, 1926	7,000	77,000	55,500	32,000	28,000	6,500	500	13,500	15,000	235,000
December 31, 1927	14,000	177,000	69,000	36,500	80,000	6,000	500	34,000	28,500	445,500
December 31, 1928	20,000	178,500	78,000	80,500	72,000	20,000	4,000	40,000	105,500	598,500
December 31, 1929	34,000	291,000	123,000	92,500	125,000	39,000	16,000	43,000	97,000	860,500

Strength found at the opening of the year, when prices of $3.90 and $4 per unit were available, was a carry-over from the close of the preceding year. After the close of the active fertilizer season, buying support was withdrawn and prices descended in sharp but orderly fashion and appeared in a settled position at $3 per unit at the close of the year. This was the lowest prices named for domestic hoof meal since September, 1927. Unlike the trend of 1928, prices in the year just completed were at their highest point during the opening four months. In the preceding year, this period was one where the low prices for that year prevailed and during the following six months the 1928 market was at its highest point, whereas last year prices fell off regularly during that period. The closing few months of both years were marked with comparatively lower prices. As the result of the low prices last year, imported hoof meal did not figure as a very important factor. Prices for this variety were generally higher than the domestic product. As in the case of the remainder of the group of animal ammoniates, the stock and poultry feeding interest offered a wider avenue for the sale of this product than fertilizer mixtures.

Fish scrap was another market where prices were marked downward from their position in 1928, and in this commodity the difference was quite pronounced. Quotations named at the opening of the fishing season in July were $1.50 below the figure representing the market at the same period last year, and unlike previous years, prices moved downward as the fishing season progressed. By no plausible hypothesis is it to be taken that stocks were very greatly increased over the 1928 fishing returns, but it was rather the long, consistent absence of demand for this product that caused prices to move downward. Prices of $5.25 and 10c. per unit ton quoted for unground stocks in January were named to govern the small carry-over from the preceding year, and during the remainder of the first quarter, as well as in April, there were no stocks available. In May, contracts were accepted on a when and if caught basis at nominal figures, but there was not much of this business closed, and when the fishing opened in the Chesapeake area prices were posted at $4.25 and 10c. per unit ton, compared with $5.50 and 10c. per unit ton at the opening of the season a year ago. This figure remained until August when a slight spurt in production brought the market downward. Further precipitation to the basis of $3.65 occurred in the following month, and it was not until this period that spot buying aggregated to an amount that might be branded as favorable. At this juncture some difference of opinion regarding the actual market price was present and a range from $3.65 and $3.75 and 10c. per unit to as high as $4.25 and 10c. represented the asking figures at various selling hands. The market closed the year rather strong but at no time was it even closely associated with the high figures of 1928. During the closing few days of the year the available supply of menhaden scrap at the Chesapeake Bay district was virtually depleted and in the opening few weeks of the new year only nominal prices were heard.

The position of wet acidulated scrap was little different from the dried material by comparison with its tendencies in 1928. At the commencement of trading last year the market was at its highest point, but the apparent lack of snap to trading in the market had recessionary effects and precipitate drops of 25c. per unit occurred almost monthly. When the market struck the summer period it held well at $3.50 and 50c. per unit ton, mainly on the support from seasonal buying. Throughout the Fall there was a sufficient degree of buying interest manifested to maintain the market, and it was not until the closing month of the year when the supply position was in such state as to cause a slight but evident move toward recovery. While comparative high and low prices for 1928 and 1929 did not show a variance of more than 25c. per unit in either direction, the average for the year just completed was much lower than its predecessor.

Although slaughterage was rather sharply curtailed over the year, tankage prices did not differ greatly from the remainder of the animal ammoniate group with respect to their comparative position with the preceding year. By virtue of the lower market for tankage, fertilizer mixers evidenced a slightly better concern in market events, but from the angle of consumption the feeding interests were more prominent and from the demand point of view were generally responsible for whatever measure of support was given to the price structure. Concentrated tankage found a ready outlet for the comparatively small production through manufacturing channels and prices were not appreciably stronger or weaker than the reigning market a year ago. Tankage for fertilizer and feed use containing 11 to 15 percent ammonia, however, sagged throughout the year. Opening trades in the unground variety were registered at $4.60 and 10c. per unit, but this figure which represented the high for the year was short-lived and in mid-year the market dropped below the $4 mark for the first time since August, 1927. Improvement developed later when the price of wheat and other feeding commodities was sufficiently high to motivate a heavy feeding demand for tankage and firmness was more or less evident until the close of the year, when distress stocks were offered at concessionary levels. The low figure for 1929 was $3.75 and 10c. per unit, or 55c. per unit below the lowest price named during the previous year. Unground and ground tankage in the Central States area was in no better favor than the Eastern market. Prices opened up in high position in furtherance of prevailing conditions at the close of 1928, but weakness set in and declines were constant. Other than for a brief period in August, when the market returned to its high figure of $4.25, due to a temporary dearth of stocks, the market was free from interruption in its downward march. The low quotation for the year in the Chicago market was $3.50 and 10c. per unit compared with $3.85 and 10c., which represented the lowest selling figure during 1928. The position of imported tankage was not as commanding in 1929 as in previous years, as evidenced by the sharp reduction of receipts here. Imports during the first eleven months of 1929 amounted to 18,223 tons, compared with 36,303 tons during a like period of 1928.

The remainder of the ammoniate group was free from any elements that might be deserving of feature. Prices for calcium nitrate and urea were reduced in line with the lowered market for other foreign synthetics.

Phosphates

The progress of the phosphate division of the market was quite perfunctory during 1929 and the feature was contained in the recessionary position of the superphosphate market. Following a period of recrudescence which commenced in the Fall of 1928, prices were maintained well over the first half of the year just completed, but again the competitive strain which has been so damaging to the structure of prices in this commodity in recent years set in. Perhaps it was buying support that was the superior force to competition during the first half of 1929, but immediately after the passing of the so-called spot buying period in the Spring prices for the run of the pile were reduced from $10 per ton to the basis of $9.50 per ton. Officially this figure was held as representative of the market over the remainder of the year, but it was common knowledge that business was closed in some isolated instances at $9 per ton for the run of the pile and $9.50 for guaranteed 16 percent stocks.

Stocks of superphosphates on hand at the opening of business in January, 1929, were in the neighborhood of 1,500,000 short tons. Spot demand during the two months that followed reduced this figure close to the 600,000 ton mark. From a production standpoint, January was the leading month and production of bulk superphosphate as well as stocks on hand at the close of the month are given in the following table that includes data up to and including November, 1929:—

	Tons— Production.	Stocks at end of month.
January	408,544	1,501,890
February	322,313	1,435,934
March	320,391	1,044,987
April	357,787	633,556
May	345,916	712,484
June	370,195	851,359
July	358,656	1,009,802
August	364,961	1,084,381
September	304,736	1,122,777
October	392,323	1,234,024
November	367,955	1,295,827

The year brought little in the way of new developments to the market for phosphate rock. Prices for land pebble and other grades of rock were entirely without change throughout the year. Official consumption figures are still lacking, but production at both the Florida and Tennessee mines was held in check to point commensurate with actual needs. The threatening competition from abroad did not expand itself over the year, total imports of phosphate materials were running less than 8 percent over the total for the preceding year.

Both domestic and imported bone materials were in a firm position throughout the year. Local sellers experienced no great difficulty in maintaining their market prices at an equal level with those that prevailed during 1928. Fluctuations of minor importance occurred in Chicago from time to time, chiefly as the result of an increase or decrease in the cattle kill, but there was nothing to change the general aspect of things and prices remained about at a parity with the ruling levels of the previous twelve months. Importers were more active in both the raw bone and meal divisions of the market, 71,391 tons of bone ash, dust meal and other bone phosphates having been entered from foreign sources of supply during the first eleven months of the year by comparison with only 51,681 tons during the corresponding period of 1928. The fertilizer interests continued as small factors in the bone group, most of the consumption having passed through feeding channels.

Potashes

While accurate production data for the calendar year 1929 is lacking, the sale of French and German potash salts here showed a substantial increase over the previous year. The local selling agency for the German and French producing syndicate announced that sales for the fertilizer year ended May, 1929, were 11 percent above those of the preceding fertilizer year, and from the weekly reports of the sellers it would not be amiss to estimate that the same margin of increase continued through the closing seven months of the calendar year. Shipments from abroad during the first eleven months of 1929 were running somewhat behind their 1928 total, amounting to 731,199 tons, compared with 803,877 tons in 1928, but it should be remembered that considerable quantities are ordered in the Fall and shipments are not made until February or March. Last year bookings for future shipment were much heavier.

The schedule for foreign potash salts was advanced in May, the high figure for the year on the 80-85 percent muriate salt being $36.75 per ton, or 35c. per ton above the high level for the previous year. The usual discounts for early-season shipment were again granted by the sellers last year.

One of the responsible factors in the increased use of potash salts was the extensive advertising campaign being conducted throughout the South by the American representatives of the foreign producers. Under the slogan "Potash Pays" the work has been carried on along educational lines and has apparently produced satisfactory results.

The position of domestic potash substances was not materially improved from the market angle last year. There was considerable development work in contemplation and some small reported use in the Southwest, but as far as could be learned there were no shipments made to the East.

Sulphur and Pyrites

The wide expansion of the chemical process industry during the first nine months of the year mirrored itself clearly in a natural increase in sulphur production last year. Exports during the year were almost 150,000 tons above the 1928 aggregate and even in the closing quarter of the year when the reactionary effects of the Wall Street crash weighted down the extent of industrial manufacturing activity, the sellers in this market did not notice any material let-down in purchasing operations. Notwithstanding the entry of new factors into the selling market, the producers were able to hold their prices without change at $18 per ton.

Prices for foreign pyrites were held

at 13c. per unit of sulphur content, without change. Consumption was held within the limited bounds of recent years, although imports up to and including November showed that the year 1929 held a margin of about 5 percent over the quantity received during a like period of 1928. Virtually all of the business was done on contract.

Fertilizer Materials: Record of Prices

Nitrogenous Materials

Nitrate of Soda

Natural

100-Ton Lots

September 23, 1874, the price was $2.12½ to $2.37½ per 100 pounds; October 18, 1881, $3.25; 1891, $2.15 to $2.20; 1901, $1.90 to $1.92½; 1911, $2.25 to $2.27½; 1913, $2.95; 1918, May, $5.50.

	Per hundredweight			
	1928.		1929.	
	H.	L.	H.	L.
January	$2.40	$2.35	$2.22½	$2.17½
February	2.35	2.30	2.22½	2.17½
March	2.32½	2.30	2.22½	2.20
April	2.32½	2.32½	2.22½	2.22½
May	2.32½	2.32½	2.22½	2.20
June	2.30	2.17½	2.17½	2.17½
July	2.15	2.15	2.17½	2.10
August	2.15	2.12½	2.10	2.07
September	2.10	2.10	2.08	2.08
October	2.15	2.15	2.10	2.10
November	2.17½	2.17½	2.11	2.11
December	2.17½	2.17½	2.12	2.12
Year	2.40	2.10	2.22½	2.07

Sulphate of Ammonia

March 5, 1873, the price was $7 per 100 pounds; October 18, 1881, $4.87½ to $5; 1891, $3 to $3.05; 1901, $2.77½ to $2.80; 1911, $3.20; 1913, $3.10; 1918, April, $7.85.

(Double bags, f.a.s., New York)

	Per hundredweight			
	1928.		1929.	
	H.	L.	H.	L.
January	$2.45	$2.45	$2.35	$2.35
February	No stocks		2.35	2.35
March	No stocks		2.35	2.30
April	No stocks		2.30	2.30
May	No stocks		2.30	2.25
June	2.35	2.35	2.25	2.20
July	2.35	2.35	2.20	2.15
August	2.35	2.35	2.15	2.15
September	No stocks		2.15	2.15
October	No stocks		2.15	2.10
November	No stocks		2.10	2.10
December	2.35	2.35	2.10	2.00
Year	**2.45**	**2.35**	**2.35**	**2.00**

Ammonia Sulphate-Nitrate

Northern Ports

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$60.85	$60.85	$61.60	$61.60
February	60.85	60.85	62.20	62.20
March	62.75	62.75	62.20	62.20
April	62.75	62.75	62.20	62.20
May	62.75	62.75	62.20	62.20
June	62.75	62.75	62.20	62.20
July	62.75	56.45	52.00	52.00
August	57.05	57.05	52.40	52.40
September	57.60	57.60	52.80	52.80
October	58.15	57.60	53.50	53.50
November	59.30	59.30	54.70	54.70
December	60.45	60.45	55.85	55.85
Year	62.75	56.45	62.20	52.00

Dried Blood

December 10, 1879, the price was $2.37½ to $2.45 per unit; 1881, $3.75 to $3.85; 1891, $1.95 to $2.05; 1901, $2.30; 1911, $3.05; 1913, $2.95; March, 1920, $8.75.

(15@17 percent ammonia, f.o.b. New York)

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$5.00	$4.95	$4.70	$4.70
February	5.10	5.00	4.65	4.60
March	5.10	5.00	4.60	4.50
April	5.00	5.00	4.50	4.45
May	4.90	4.85	4.50	4.25
June	4.95	4.90	4.00	3.90
July	4.90	4.90	4.10	3.90
August	4.95	4.85	4.50	4.30
September	4.75	4.65	4.45	4.35
October	4.75	4.65	4.35	4.35
November	4.85	4.85	4.35	4.10
December	4.80	4.75	3.95	3.85
Year	5.10	4.65	4.70	3.85

Hoofmeal

July 4, 1904, the price was $2.25 to $2.30 per unit; October 18, 1911, $2.60 to $2.70; 1913, $2.95; 1920, May, $7.50.

(F.o.b. Chicago)

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.25	$3.25	$3.90	$3.90
February	3.25	3.25	3.90	3.90
March	3.25	3.25	4.00	4.00
April	3.25	3.25	4.00	3.75
May	3.75	3.25	3.75	3.75
June	4.50	4.25	3.75	3.50
July	4.25	4.25	3.50	3.50
August	4.00	4.00	3.50	3.50
September	4.00	4.00	3.50	3.50
October	4.00	4.00	3.00	3.00
November	3.75	3.75	3.00	3.00
December	3.85	3.75	3.00	3.00
Year	4.50	3.25	4.00	3.00

Fish Scrap, Dry

January 6, 1902, the price was $24.50 to $25 per unit; October 18, 1911, $3.25 and 10c.; 1913, $3.10 and 10c.; 1917, November, $6.67½ and 10c.

(F.o.b. factory)

	1928					
	Per unit					
	High.			Low.		
January	$5.90	&	.10	$5.90	&	.10
February	5.90	&	.10	5.90	&	.10
March	5.90	&	.10	5.90	&	.10
April	No stocks			No stocks		
May	No stocks			No stocks		
June	No stocks			No stocks		
July	5.50	&	.10	5.50	&	.10
August	5.50	&	.10	5.50	&	.10
September	5.50	&	.10	5.00	&	.10
October	5.25	&	.10	5.00	&	.10
November	5.50	&	.10	5.50	&	.10
December	5.50	&	.10	5.50	&	.10
Year	5.90	&	.10	5.00	&	.10

	1929					
	Per unit					
	High.			Low.		
January	$5.50	&	.10	$5.25	&	.10
February	No stocks			No stocks		
March	No stocks			No stocks		
April	No stocks			No stocks		
May	4.25	&	.10	4.00	&	.10
June	4.00	&	.10	4.00	&	.10
July	4.00	&	.10	4.00	&	.10
August	4.00	&	.10	3.75	&	.10
September	3.75	&	.10	3.65	&	.10
October	4.00	&	.10	3.65	&	.10
November	4.25	&	.10	3.75	&	.10
December	4.25	&	.10	4.25	&	.10
Year	5.50	&	.10	3.65	&	.10

Fish Scrap, Wet

January 6, 1902, the price was $13 to $13.50 per unit; October 18, 1911, $2.70 and 50c.; 1919, January, $7 and 75c.

(F.o.b factory)

	1928.					
	Per unit					
	High.			Low.		
January	$4.00	&	.50	$4.00	&	.50
February	4.00	&	.50	4.00	&	.50
March	4.00	&	.50	4.00	&	.50
April	No stocks			No stocks		
May	No stocks			No stocks		
June	No stocks			No stocks		
July	4.50	&	.50	4.50	&	.50
August	4.50	&	.50	4.50	&	.50
September	4.50	&	.50	4.25	&	.50
October	4.45	&	.50	4.25	&	.50
November	4.75	&	.50	4.60	&	.50
December	4.75	&	.50	4.60	&	.50
Year	4.75	&	.50	4.00	&	.50

	1929.					
	Per unit					
	High.			Low.		
January	$4.75	&	.50	$4.75	&	.50
February	4.75	&	.50	4.25	&	.50
March	4.50	&	.50	4.25	&	.50
April	4.25	&	.50	4.25	&	.50
May	3.75	&	.50	3.50	&	.50
June	3.50	&	.50	3.50	&	.50
July	3.50	&	.50	3.50	&	.50
August	3.50	&	.50	3.50	&	.50
September	3.50	&	.50	3.50	&	.50
October	3.50	&	.50	3.50	&	.50
November	3.50	&	.50	3.50	&	.50
December	3.75	&	.50	3.50	&	.50
Year	4.75	&	.50	3.50	&	.50

Tankage, Concentrated

September 4, 1889, the price was $2.27½ to $2.30 per unit; October 18, 1871, $1.75 to $1.80; 1901, $1.20; 1911, $2.70; 1913, $2.45; 1920, July, $7.25.

(F.o.b. Chicago)

	Per unit			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.75	$3.75	$4.25	$4.25
February	3.75	3.75	4.25	4.00
March	3.75	3.75	4.00	4.00
April	3.75	3.75	4.00	4.00
May	3.75	3.75	4.00	3.90
June	4.00	4.00	3.90	3.90
July	4.25	4.00	4.00	3.90
August	4.25	4.25	4.00	4.00
September	4.25	4.25	4.00	4.00
October	4.25	4.25	4.00	4.00
November	4.25	4.25	4.00	4.00
December	4.25	4.25	4.00	4.00
Year	4.25	3.75	4.25	3.90

Tankage, Unground, 11 and 15 Percent

(F.o.b. Chicago)

	1928.					
	Per unit					
	High.			Low.		
January	$3.85	&	.10	$3.85	&	.10
February	3.85	&	.10	3.85	&	.10
March	3.85	&	.10	3.85	&	.10
April	3.85	&	.10	3.85	&	.10
May	3.85	&	.10	3.85	&	.10
June	3.90	&	.10	3.90	&	.10
July	4.25	&	.10	3.90	&	.10
August	4.25	&	.10	4.25	&	.10
September	4.25	&	.10	4.25	&	.10
October	4.25	&	.10	4.25	&	.10
November	4.25	&	.10	4.25	&	.10
December	4.25	&	.10	4.25	&	.10
Year	4.25	&	.10	3.85	&	.10

	1929.					
	Per unit					
	High.			Low.		
January	$4.25	&	.10	$4.00	&	.10
February	4.00	&	.10	4.00	&	.10
March	4.00	&	.10	4.00	&	.10
April	4.00	&	.10	4.00	&	.10
May	4.00	&	.10	4.00	&	.10
June	3.75	&	.10	3.65	&	.10
July	3.75	&	.10	3.75	&	.10
August	4.25	&	.10	3.75	&	.10
September	3.50	&	.10	3.50	&	.10
October	3.50	&	.10	3.50	&	.10
November	3.50	&	.10	3.50	&	.10
December	3.50	&	.10	3.50	&	.10
Year	4.25	&	.10	3.50	&	.10

Tankage, Unground, New York

	1928.					
	Per unit					
	High.			Low.		
January	$4.60	&	.10	$4.50	&	.10
February	4.50	&	.10	4.40	&	.10
March	4.50	&	.10	4.35	&	.10
April	4.35	&	.10	4.30	&	.10
May	4.50	&	.10	4.30	&	.10
June	4.50	&	.10	4.50	&	.10
July	4.50	&	.10	4.45	&	.10
August	4.50	&	.10	4.45	&	.10
September	4.40	&	.10	4.40	&	.10
October	4.45	&	.10	4.40	&	.10
November	4.50	&	.10	4.50	&	.10
December	4.60	&	.10	4.50	&	.10
Year	4.60	&	.10	4.30	&	.10

	1929.					
	Per unit					
	High.			Low.		
January	$4.60	&	.10	$4.60	&	.10
February	4.60	&	.10	4.55	&	.10
March	4.55	&	.10	4.55	&	.10
April	4.55	&	.10	4.25	&	.10
May	4.25	&	.10	4.25	&	.10
June	4.00	&	.10	3.75	&	.10
July	4.10	&	.10	3.75	&	.10
August	4.10	&	.10	4.10	&	.10
September	4.30	&	.10	4.30	&	.10
October	4.40	&	.10	4.40	&	.10
November	4.40	&	.10	4.25	&	.10
December	4.25	&	.10	4.15	&	.10
Year	4.60	&	.10	3.75	&	.10

Calcium Nitrate

15½ Percent

Northern Ports

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$46.75	$46.75	No prices	
February	46.75	46.75	No prices	
March	48.75	46.75	No prices	
April	48.75	48.75	No prices	
May	48.75	48.75	No prices	
June	48.75	48.75	No prices	
July	48.75	48.75	No prices	
August	No prices		No prices	
September	No prices		$42.00	$42.00
October	No prices		42.00	42.00
November	No prices		42.00	42.00
December	No prices		42.00	42.00
Year	48.75	46.75	42.00	42.00

Phosphates

Superphosphate, Basis 16 Percent

January 7, 1885, the price was $12 to $15 per ton; October 18, 1891, $14.50 to $15; 1901, $9.60 to $10; 1911, $8 to $8.75; 1913, $7.20 to $8; 1920, June, $21.

(F.o.b. Baltimore)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$8.50	$8.50	$10.00	$10.00
February	8.50	8.50	10.00	10.00
March	8.50	8.50	10.00	10.00
April	8.50	8.50	10.00	10.00
May	8.50	8.50	10.00	10.00
June	9.60	9.50	10.00	9.50
July	9.60	9.60	9.50	9.50
August	9.60	9.60	9.50	9.50
September	10.00	10.00	9.50	9.50
October	10.00	10.00	9.50	9.50
November	10.00	10.00	9.50	9.50
December	10.00	10.00	9.50	9.50
Year	10.00	8.50	10.00	9.50

Phosphate Rock, Florida Land Pebble, 68 Percent

June 8, 1881, the price (grade not specified) was $14 to $16 per ton; October 18, 1881, $9.50; 1891, $6.50 to $7.50; 1901, $7 to $7.50; 1911, $3.70 to $3.80; 1913, $3 to $3.25; 1920, July, $12.

(F.o.b. mines)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$3.00	$3.00	$3.10	$3.10
February	3.00	3.00	3.10	3.10
March	3.00	3.00	3.10	3.10
April	3.00	3.00	3.10	3.10
May	3.00	3.00	3.10	3.10
June	3.00	3.00	3.10	3.10
July	3.00	3.00	3.10	3.10
August	3.00	3.00	3.10	3.10
September	3.10	3.10	3.10	3.10
October	3.10	3.10	3.10	3.10
November	3.10	3.10	3.10	3.10
December	3.10	3.10	3.10	3.10
Year	.310	3.00	3.10	3.10

Bones, Raw, Ground

July 18, 1880, the price was $28 per ton; October 18, 1881, $35 to $37; 1891, $25 to $28; 1901, $20 to $21; 1911, $28.50 to $30; 1913, $28 to $30; 1920, July, $62.50.

(F.o.b. Chicago)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$34.00	$34.00	$42.00	$42.00
February	42.00	42.00	42.00	42.00
March	42.00	42.00	42.00	42.00
April	42.00	42.00	42.00	42.00
May	42.00	42.00	42.00	42.00
June	42.00	42.00	42.00	42.00
July	42.00	42.00	42.00	42.00
August	42.00	42.00	42.00	42.00
September	42.00	42.00	42.00	42.00
October	42.00	42.00	42.00	42.00
November	42.00	42.00	42.00	42.00
December	42.00	42.00	42.00	39.00
Year	42.00	34.00	42.00	39.00

Bones, Ground, Steamed, f.o.b. Chicago

(1¼ and 60 percent)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$28.00	$28.00	$28.50	$28.50
February	34.00	34.00	28.50	28.50
March	34.00	34.00	28.50	28.50
April	34.00	34.00	28.50	28.50
May	34.00	34.00	28.50	28.50
June	34.00	28.50	28.50	28.50
July	30.00	30.00	28.50	28.50
August	30.00	30.00	28.50	28.50
September	28.50	28.50	28.50	28.50
October	28.50	28.50	28.50	28.50
November	28.00	28.00	28.50	28.50
December	28.50	28.50	28.50	28.50
Year	34.00	28.00	28.50	28.50

Potashes

Muriate, 80 to 85 Percent, Basis 80 Percent

August 13, 1879, the price was $1.40 to $1.42 per unit; October 18, 1881, 73c. to 76c.; 1891, 74c. to 80c.; 1901, 76.25c. to 78.80c.; 1911, 85c. to 90c.; 1913, 80c.; 1918, January, $7.30.

	Per ton in bags			
	1928.		1929.	
	H.	L.	H.	L.
January	$36.40	$36.40	$36.40	$36.40
February	36.40	36.40	36.40	36.40
March	36.40	36.40	36.40	36.40
April	36.40	36.40	36.40	36.40
May	36.40	36.40	36.75	36.75
June	36.40	36.40	36.75	36.75
July	36.40	36.40	36.75	36.75
August	36.40	36.40	36.75	36.75
September	36.40	36.40	36.75	36.75
October	36.40	36.40	36.75	36.75
November	36.40	36.40	36.75	36.75
December	36.40	36.40	36.75	36.75
Year	36.40	36.40	36.75	36.40

Sulphate, 90 to 95 Percent, Basis 90 Percent

October 3, 1888, the price was $2.25 to $2.35 per unit; October 18, 1891, 83c.; 1901, 85c.; 1911, 94c.; 1913, 94c.; 1918, January, $8.

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$47.30	$47.30	$47.30	$47.30
February	47.30	47.30	47.30	47.30
March	47.30	47.30	47.30	47.30
April	47.30	47.30	47.30	47.30
May	47.30	47.30	47.75	47.75
June	47.30	47.30	47.75	47.75
July	47.30	47.30	47.75	47.75
August	47.30	47.30	47.75	47.75
September	47.30	47.30	47.75	47.75
October	47.30	47.30	47.75	47.75
November	47.30	47.30	47.75	47.75
December	47.30	47.30	47.75	47.75
Year	47.30	47.30	47.75	47.30

Pyrites and Sulphur

Pyrites

January 2, 1905, the price was 10c. to 11c. per unit ton; October 18, 1911, 10c. to 10½c.; 1913, 10½c. to 11c.; 1917, December 25c.

	Per unit ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.13	$0.13	$0.13	$0.13
February	.13	.13	.13	.13
March	.13	.13	.13	.13
April	.13	.13	.13	.13
May	.13	.13	.13	.13
June	.13	.13	.13	.13
July	.13	.13	.13	.13
August	.13	.13	.13	.13
September	.13	.13	.13	.13
October	.13	.13	.13	.13
November	.13	.13	.13	.13
December	.13	.13	.13	.13
Year	.13	.13	.13	.13

Sulphur

(Crude Brimstone)

(F.o.b. mines in bulk)

	Per ton			
	1928.		1929.	
	H.	L.	H.	L.
January	$18.00	$18.00	$18.00	$18.00
February	18.00	18.00	18.00	18.00
March	18.00	18.00	18.00	18.00
April	18.00	18.00	18.00	18.00
May	18.00	18.00	18.00	18.00
June	18.00	18.00	18.00	18.00
July	18.00	18.00	18.00	18.00
August	18.00	18.00	18.00	18.00
September	18.00	18.00	18.00	18.00
October	18.00	18.00	18.00	18.00
November	18.00	18.00	18.00	18.00
December	18.00	18.00	18.00	18.00
Year	18.00	18.00	18.00	18.00

Naval Store Prices

(Continued from page 97)

Tar, Kiln Burned

October 18, 1871, the price was $3.25 to $3.37½; 1881, $3.25; 1891, $1.80; 1901, $1.90; 1911, $7.75; 1913, $7; 1920, February, $15.50.

	Per barrel			
	1928.		1929.	
	H.	L.	H.	L.
January	$12.50	$12.50	$12.50	$12.50
February	12.50	12.50	12.50	12.50
March	12.50	12.50	12.50	11.50
April	12.50	12.50	11.50	11.50
May	12.50	12.50	11.50	11.50
June	12.50	12.50	11.50	11.50
July	12.50	12.50	11.50	11.50
August	12.50	12.50	11.50	11.50
September	12.50	12.50	11.50	11.50
October	12.50	12.50	11.50	11.50
November	12.50	12.50	11.50	11.50
December	12.50	12.50	11.50	11.50
Year	12.50	12.50	12.50	11.50

Rosin Oil, First Rectified

October 18, 1871, the price was 28c.; 1881, 14½c.; 1891, 10c. to 10½c.; 1901, 15c.; 1911, 36c.; 1913, 27c.; 1920, January, 97c.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.55	$0.58	$0.62	$0.62
February	.55	.58	.62	.62
March	.55	.55	.56½	.56½
April	.55	.53	.56½	.56½
May	.53	.53	.56½	.56½
June	.55	.53	.56½	.56½
July	.55	.55	.60	.56½
August	.60	.55	.60	.60
September	.60	.57	.63	.60
October	.57	.57	.63	.63
November	.62	.62	.63	.60
December	.62	.62	.60	.57
Year	.62	.53	.63	.56½

Rosin Oil, Third Rectified

October 18, 1871, the price was 35c.; 1881, 20½c.; 1891, 14c. to 14½c.; 1901, 19c.; 1911, 46c.; 1913, 48c.; 1920, March, $1.15.

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.65	$0.65	$0.69	$0.69
February	.65	.65	.72	.69
March	.68	.65	.68	.68
April	.68	.60	.68	.68
May	.60	.60	.68	.68
June	.62	.60	.68	.68
July	.62	.62	.72	.68
August	.76	.62	.72	.72
September	.76	.68	.75	.72
October	.68	.68	.75	.75
November	.69	.69	.75	.72
December	.69	.69	.72	.68
Year	.76	.60	.75	.68

Petroleum Prices

(Continued from page 106)

Naphtha, Bulk

64-66 deg., 375 endpoint)

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.08¾	$0.08¼	$0.10¾	$0.09¾
February	.08¾	.08¾	.10	.10
March	.09	.08¾	.10	.10
April	.09¼	.09¼	.10	.10
May	.09¾	.09¼	.10	.10
June	.10	.09¾	.10	.10
July	.12¼	.10¼	.10	.10
August	.12¼	.12¼	.10	.10
September	.12¼	.11¾	.10	.10
October	.11¼	.11¼	.10	.10
November	.11½	.11½	.10	.10
December	.11½	.10¾	.10	.10
Year	.12¼	.08¼	.10¾	.09¾

Kerosene

Prime White, Bulk

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.06	$0.05¾	$0.06¾	$0.06¾
February	.05¾	.05¾	.06¾	.06¾
March	.05¾	.05¾	.07¾	.06¾
April	.06¾	.06	.07¾	.07¾
May	.06¾	.06¾	.07¾	.07¾
June	.07¾	.06¼	.07¾	.07¾
July	.06¾	.06¾	.07¾	.07¾
August	.06¾	.06¾	.07¾	.07¾
September	.06¾	.06¾	.07¾	.07¾
October	.06¾	.06¾	.07¾	.07¾
November	.06¾	.06¾	.07¾	.07¾
December	.06¾	.06¾	.07¾	.07¾
Year	.06¾	.05¾	.07¾	.06¾

Water White, Bulk

	Per gallon			
	1928.		1929.	
	H.	L.	H.	L.
January	$0.07	$0.06¾	$0.07¾	$0.07¾
February	.06¾	.06¾	.07¾	.07¾
March	.06¾	.06¾	.08¾	.07¾
April	.07¾	.07	.08¾	.08¾
May	.07¾	.07¾	.08¾	.08¾
June	.08¾	.07½	.08¾	.08¾
July	.07¾	.07¾	.08¾	.08¾
August	.07¾	.07¾	.08¾	.08¾
September	.07¾	.07¾	.08¾	.08¾
October	.07¾	.07¾	.08¾	.08¾
November	.07¾	.07¾	.08¾	.08¾
December	.07¾	.07¾	.08¾	.08¾
Year	.08¾	.06¾	.08¾	.07¾

Mergers and Acquisitions in 1929

Acquisitions and mergers which took place during the year 1929 in the fields covered by the Oil, Paint and Drug Reporter were as follows:—

African & Eastern Trading Company and Niger Company merged.

Air Reduction Company acquired Pure Carbonic Company.

Allen-Foster, Inc., merged with Weda Chemical Company and are being jointly managed by the Aleveda Company.

Allied Laboratories, Inc., formed from merger of Pitman-Moore Company; Royal Serum Company; Sioux City Serum Company; Sioux Falls Serum Company, and United Serum Company.

American Commercial Alcohol Company organized American Commercial Alcohol Company of California to handle its Pacific Coast business; it acquired the International Solvents Corporation of California; Kessler Chemical Company.

American Cyanamide Company merged Kalbfleisch Corporation; acquired Selden Company; American Powder Company.

American Nokol Corporation merged with Petroleum Heat & Power Company.

American Solvents & Chemical Corporation purchased Cragin Products Company.

American Sponge & Chamois Company bought Lasker & Bernstein, Inc.

American Tar Products Company acquired White Tar Company of New Jersey.

American Yvette Company formed Catherine Day Laboratories to take over John Post Laboratories.

Anglo-Chilean Consolidated Nitrate Corporation acquired Santaro Nitrate Company.

Ansbacher Corporation formed by the consolidation of the Ansbacher Color Corporation and Ansbacher Insecticide Company; subsequently this company merged with G. Siegle Corporation of America, forming the Ansbacher-Siegle Corporation. This later acquired Contex Color Company.

Archer-Daniels-Midland Company acquired interest in Werner G. Smith Company.

Atlantic Refining Company acquired New Jersey distributing facilities of Pacific Refining Company; also Empire State Oil Company.

Baker & Co. bought R. & H. Platinum Works, Inc.

Borden Company acquired Casein Company of America.

By-Products Coke Company acquired Toledo Furnace Company; Zenith Furnace Company; furnace and coke plant of Perry Iron Company and a new name, Interlake Iron Corporation designated for the merger.

Calco Chemical Company acquired by the American Cyanamid Company; acquires Crown Chemical Company; King Chemical Company; Textile Chemical Company; May Chemical Works, Inc.

Calumet & Arizona Mining Company consolidated with New Cornelia Copper Company.

Canada Gypsum & Alabastine, Ltd., purchased Beachville Lime & Stone Company; Christie-Henderson Company, Ltd.; D. Robertson Lime Company; Toronto Lime Company, and Wellington Lime Company.

Certo Corporation acquired by the Postum Company.

Chicago White Lead & Oil Company, H. M. Hooker Paint & Glass Company, and King Varnish Company merged.

Cities Service Company acquired Commonwealth Oil Company; Louisiana Oil Refining Company; Mutual Oil Company; Grimes-Madican Company; Consolidated Service Stations Company; Toroco Filling Stations.

Commercial Solvents Corporation acquired Commercial Pigments Corporation.

Compressed Gas Corporation acquired by Union Carbide & Carbon Company.

Consolidated Feldspar Corporation organized to acquire the Golding Sons' Company; the Erwin Feldspar Company; the Dominion Feldspar Corporation; the Maine Feldspar Company; the Isco-Batuz Company; the Feldspar Quarries Company, and the Norman G. Smith Company.

Continental Can Company acquired the following:—Manhattan Can Company; McDonald Machine Company; Federal Can Company; Sociedad Industrial de Cuba; canning plant of Penick & Ford, Ltd., at Harvey, La.; Nashville Corrugated Box Company.

Continental Oil Company merged Marland Oil Company; Plymouth Oil Company.

Cornish Tin Smelting Company, Eastern Tin Smelting, Penpoll Tin Smelting Company, and Williams, Harvey & Co. plan merger.

Cosden Oil Company acquired Regal Petroleum Company.

Coty, Inc., foreign companies more closely affiliated with Coty, Inc., in United States.

Crown Cork International Corporation organized as merger of the Crown Cork & Seal Company, Ltd., Southall, England; Crown Cork Company, Ltd., Rio de Janeiro; Wallis Crown Cork Company, Ltd., London; Crown Cork & Seal Company, Toronto; Fulham Manufacturing Company, Ltd., London; Corchera International, Seville; Hijos de H. A. Bender, San Felin, Spain; H. A. Bender, Sohne, Mannheim, Germany; Korkafabrick Frankenthal-Bender & Co., Frankenthal, Germany, and Societe de Bouchon Couronne, Paris.

Darby Petroleum Company merged with Tidal Osage Oil Company, a subsidiary of the Tide Water Oil Company.

Davison Chemical Company purchased Berkshire Chemical Company; Eremont Cotton Oil Company; Washington, Alexander & Cook; Oxford Packing Company.

Dixie Oil Company, subsidiary of Standard Oil Company of Indiana, bought half interest in Amerada Corporation leaseholds, undeveloped, in Oklahoma and Kansas.

Drug, Inc., acquired 3-in-1 Oil Company; Bristol-Myers Company; Life Savers, Inc.

DuPont, E. I., de Nemours & Co. purchased Krebs Pigment & Chemical Company.

Emerson's Bromo-Seltzer, Inc., formed as holding company to acquire stock of Emerson Drug Company and Maryland Glass Corporation, a subsidiary.

Empire Oil Works Company merged with Wolverine Lubricants Company.

Evans-Wallower Lead Company acquired interest of the Eastern Electrolytic Zinc Company in the Tainton process rights for electrolytic zinc.

Food Products Holding Company formed to take over Fleischmann Company, Royal Baking Powder Company, and E. W. Gillett Company.

General Industrial Alcohol Corporation formed to acquire General Industrial Alcohol Company; National Industrial Alcohol Company; Greendale Company; Michigan Chemical Company, and the Molasses Distributors' Corporation, which had purchesed the domestic blackstrap molasses department of the American Molasses Company and certain subsidiaries; corporation's plant at Marrero, La., bought by American Molasses Company.

General Printing Ink Corporation formed by consolidation of George H. Morrill Company; Fuchs & Lang Manufacturing Company; Sigmund Ullman Company; Eagle Printing Ink Company, and American Printing Ink Company.

Gillespie-Rogers-Pyatt Corporation consolidated the Rogers-Pyatt Shellac Company, and L. C. Gillespie & Sons.

Gilmore Consolidated Oil Corporation formed from consolidation of the Gilmore Oil Company; the Bolsa Chica Oil Corporation, and the E. J. Miley Oil Company.

Gilpin, H. B. Company acquired Donnel-Kenngott & Gray, Inc.

Graesser-Monsanto Chemical Works, London, acquired Sunderland tar distilling works of Brotherton & Co.

Glidden Company purchased factory, equipment and inventory of food products plant of Colgate-Palmolive-Peet Company at Portland, Ore.; E. R. Durkee & Co.; W. W. Benchley Margarine Company; Portland Vegetable Oil Mills Company.

Glycerin, Ltd., formed for merger of refined glycerin interests of Lever Bros.; Crosfield & Sons; William Gossage & Sons, and Chris Thomas & Bros.

Harris, J. E., Company bought Arlington Paint & Varnish Company.

Household Products, Inc., acquired "Mum," a proprietary deodorant, from George B. Evans, of Philadelphia; also a subsidiary of Scott & Turner, Ltd., in England, selling "Andrew's Liver Salt."

Imperial Oil, Ltd., acquired Lowery Petroleums, Ltd.

International Perfumes, Inc., consolidated Woodworth, Inc., and Bourjois, Inc.

International Quality Products Corporation to acquire Colgate-Palmolive-Peet Company, in consolidation with Kraft-Pheni Cheese Corporation and Hershey Chocolate Company.

International Smelting Company acquired holdings of Knight Investment Company in Tintic mining district.

Interstate Chemical Company acquired Danforth Chemical Company.

Italo Petroleum Corporation acquired McKean Oil Company and several others. Jaenecke-Ault Corporation acquired Jaenecke-Ault Company.

Kalbfleisch Corporation acquired John C. Wiarda & Co.

Kemp & Lane Company acquired S. B. Goff Sons & Co.

Kiefer-Stewart Company acquired Lipman-Taylor Refrigerating Corporation.

Langley & Michaels, Inc., acquired Benson, Smith & Co., and Hollister Drug Company, both in Honolulu.

Lehn & Fink Products Company acquired Lesquendieu, Inc.

Lever Brothers amalgamated with Margarin Union, which subsequently merged with United Africa Company.

Levis-Robinson Company formed Irving A. Levis, representing Taylor, Lowenstein & Co., and Uell M. Robinson, dealer in Carolina tar and pitch.

Lion Oil Company acquired Independent Oil Company.

Loft, Inc., acquired Allison Drug Stores Corporation.

London Tin Syndicate to absorb Tin Selection Trust, Ltd.; London Malayan Tin Trust, Ltd.; Anglo-Bauchi Tin Dredging Company, and Mongue (Nigeria) Tin Mines, Ltd.

Lone Star Gas Corporation purchased common stock from Utilities, Inc., of Texas Cities Gas Company; Council Bluffs Company; Northwest Cities Gas Company; Coos Bay Gas Company; Guthrie Gas Company.

Mac-lac-Kasebier-Chatfield Corporation formed by consolidation of Kasebier-Chatfield Shellac Company and Mac-lac Company.

Marland Oil Company acquired Prudential Refining Corporation; Co-Service Oil Company; Beaver Oil Company; Texon Oil & Land Company.

McKesson & Robbins acquired the following:—Noyes Brothers & Cutler Drug Company; Blanding & Blanding, Inc.; Bronx Drug Company; H. &. J. Brewer Company; J. W. Crowdus Drug Company; Doster Northington, Inc.; L. Eisen & Co.; Hornick, More & Porterfield; Huntington Drug Company; C. S. Little & Co.; C. J. Lincoln Company; J. S. Merrell Drug Company; Ogden Wholesale Drug Company; Parker-Blake Company, Ltd.; Peter-Neat-Richardson Company; C. E. Potts Drug Company; J. B. Riley Drug Company; Roanoke Drug Company; Schuh Drug Company; Charles E. Schumacher Company; Spokane Drug Company; Spurlock-Neal Company; Stewart & Holmes Drug Company; Alfred Vogeler Drug Company; Van Vleet-Ellis Corporation; Colorado Wholesale Drug Company; Berry, De Moville & Co.; Duff Drug Company; Charles W. Whittlesey Company; Hartz & Bahnsen; contracted for codliver oil output of Isdahl & Co., Norway.

Middle States Oil Corporation sold to reorganization committee.

Missouri-Kansas Pipe Line Company acquired Wood Oil Company.

Monroe Chemical Company acquired Mary T. Goldman Company.

Monsanto Chemical Works, Inc., absorbed sale of Graesser-Monsanto products, formerly handled by the Tar Acid Refining Company; acquired Rubber Service Laboratories and its subsidiary, Elko Chemical Company; British Saccharin Manufacturing Company; Commonwealth division of Mathieson Alkali Works; Merrimac Chemical Company.

Morana, Inc., consolidated with A. L. Van Ameringen, Inc.

National Ammonia Company, subsidiary of E. I. duPont de Nemours & Co., acquired Pacific Ammonia & Chemical Company.

National Lead Company acquired substantial minority interest in Associated Lead Manufacturers, Ltd., England; sold half-interest in Williams, Harvey & Co. to Patino Mines & Enterprises Consolidated, Inc., formed National Lead Company of Canada, Ltd.

National Service Companies acquired Bushfield Oil Company.

New England Oil Refining Company bought by Shell Eastern Petroleum Products, Inc.

Newport Company acquired Rhodia Chemical Company and Acetol Products, Inc.

Niagara Hudson Power Company acquired Hudson Valley Coke & Products Corporation.

Oil Well Supply Company merged with Wilson Snyder Manufacturing Company.

Owens-Illinois Glass Company consolidated the Owens Bottle Company and Illinois Glass Company.

Pacific Western Oil Company acquired properties of the Kettleman Oil Corporation on North dome of Kettleman Hills, Cal.

Paragon Oil Company acquired Valvoline Oil Company.

Parke-Davis & Co. bought capsule division of Arthur Cotton Company.

Pennsylvania Salt Manufacturing Company acquired General Laboratories, Inc.

Phillips Petroleum Company acquired State Oil Company; Minnesota and Wisconsin service stations of Hancock Oil Company; Wilhoit Oil Company; Winters Oil Company.

Pittsburgh Plate Glass Company acquired Eastwood Glass Company.

Prairie Oil & Gas Company purchased the Midcontinent crude petroleum producing properties of Thomas B. Slick, in Oklahoma.

Procter & Gamble Company acquired Duz Company.

Raybestos Manhattan Company formed from merger of United States Asbestos Company, Raybestos Company, and Manhattan Rubber Manufacturing Company.

Refiners Oil Company acquired Brilliant Oil Company.

Richfield Oil Company of California consolidated with Pan-American Western Petroleum Company; acquired Universal Consolidated Oil Company; Samson Oil Company; Inland Empire Refining Company; Heath Oil Company; Tiona Refinning Company; Peerless Oil Company; Cleary Service chain; Walburn Petroleum Corporation.

St. Joseph Lead Company acquired Desloge Consolidated Lead Company.

Salt Creek Producers' Association merged with Mountain Producers' Corporation.

Schaap Drug Corporation formed from merger of John Schaap & Sons Drug Company and Morris-Morton Drug Company.

Schimmel & Co., Germany, purchased Anton Deppe Soechne Shaner Oil Company; Messerly Oil Company, Davis Oil Company, Kings Run Oil Company, and Mix Run Oil Company merged under leadership of W. E. Dusenberry, Olean, N. Y.

Sharp & Dohme, Inc., merged H. R. Mulford Company.

Shell Eastern Petroleum Products, Inc., acquired Penn Oil Company.

Shell Petroleum Corporation acquired the following:—New Orleans Refining Company; Western Oil Refining Company; Automobile Gasoline Company.

Shell Union Oil Corporation acquired Seneca Stations, Inc.; New England Oil Refining Company.

Sherwin-Williams Company merged Lowe Brothers Company.

Simms Petroleum Company merged with Pennok Oil Company.

Sinclair Consolidated Oil Company acquired the following:—Puritan Oil Company; Central Ohio Oil Company; Deiheime Oil Corporation.

Smith, Kline & French Company merged with Valentine H. Smith & Co. as Smith, Kline & French, Inc.

Southwestern Drug Company formed to merge Ainsworth Drug Company; Greiner-Kelly Drug Company; Houston Drug Company; Texas Drug Company; Thompson Drug Company; Waco Drug Company, and H. W. Williams & Co.

Spencer Kellogg & Sons, Inc., acquired Ankeny Linseed Manufacturing Company; Copra Milling Company; chinawood oil plant of L. C. Gillespie & Sons.

Stanco, Inc., acquired Daggett & Ramsdell.

Standard Gas & Electric Company merger planned with Standard Power & Light Corporation.

Standard I. G. Company formed by Standard Oil Company of New Jersey and German I. G. Farbenindustrie in development of hydrogenation of oil and coal.

Standard Oil Company of California bought Pacific Public Service Company; Consumers' Gas Company.

Standard Oil Company of Indiana acquired Pan-American Petroleum & Transport Company.

Standard Oil Company of Kansas acquired Tulsa Oil Company.

Standard Oil Company of Louisiana acquired Liberty Oil Company.

Standard Oil Company of New Jersey acquired Anglo-American Oil Company.

Standard Oil Company of New York bought sixty-seven filling stations in New York City, Westchester county and Long Island, and twenty-seven in Providence, R. I.; also White Eagle Oil & Refining Company.

Standard Oil Company of Ohio acquired Caldwell & Taylor, Inc.

Standard Oil Company of Pennsylvania acquired Maloney Oil & Manufacturing Company.

Standard Plate Glass Company sold paint manufacturing end of its business to H. K. Watson and associates.

Tide Water Oil Company acquired Service Oil Company; Essanarr Company; Royal Oil Stations.

Tide Water Pipe Company purchased refining, producing, and pipeline properties of Emery Manufacturing Company.

Tri-Utilities Corporation, new name of United Power, Gas & Water Company, which acquired Southern Natural Gas Corporation; Federal Water Service Corporation, and People's Light & Power Corporation.

Tungsten Electric Corporation formed to acquire Callite Product Company; Independent Contact Manufacturing Company; International Wire Company; Precision Metal Products Company.

Union Chimique Belge acquired Compagnie Belge des Produits Chimiques de Schoonaerade; Produits Refractaires de Saine Chislain; Suivres, Metauxs et Produits Chimiques d'Hemixen; Pharmacie Centrale de Belgique; Compagnie Progil Belge des Extraites Tannants et Colorants d'Hemixen.

Union Producing Company formed by United Gas Company to consolidate oil production of its subsidiaries.

United Chemicals, Inc., incorporated to acquire control of Westvaco Chlorine Products Corporation; acquired Curtin-Herve Corporation; Monarch Chemical Company.

United Feldspar Corporation formed to acquire Tennessee Mineral Products Corporation; Oxford Mining & Milling Company; Perham Crystal Feldspar Mines, and United States Feldspar Corporation.

United Gas Company acquired control of Consolidated Gas Utilities Company.

U. S. Industrial Alcohol Company acquired Kentucky Alcohol Corporation.

United Stores Corporation formed as holding company of United Cigar Stores Company; Tobacco Products Company; Union Tobacco Company; Neve Drug Stores Company; Whelan Drug Company, and certain Schulte interests.

Vacuum Oil Company acquired stock holdings of the Sinclair Consolidated Oil Corporation in the Compagnie Industriele des Petroles, and other French concerns, also Lubrite Refining Company; Metro Stations, Inc.

Vadsco Sales Corporation took over manufacture and distribution of medicinal products of Tarrant Company.

William B. Warner Company acquired Waterbury Chemical Company.

Warner-Quinlan Company obtained control of the Municipal Service Corporation.

Wayside Oil Corporation acquired Savin Oil Company.

Welch Grape Juice Company bought by syndicate headed by Paul M. Davis.

Welch, Home & Clark Company acquired by Elias D. Stultz, J. Hewitt Vermilyea, Edward J. Welcke, and M. Ernest Clark.

Western Gulf Oil Company merged Pacific Eastern Producing Company.

Whelan Drug Company acquired T. P. Taylor & Co.

Mineral Production In the U. S. in 1929

The total value of mineral products in the United States in 1929 is estimated at approximately $5,900,000,000 by Scott Turner, director of the United States Bureau of Mines, Department of Commerce. This is an increase of nearly 10 percent over the total value of mineral products in 1928, which is due to increases in the total value of metals and the mineral fuels produced. The total value of nonmetallic mineral products in 1929 decreased slightly from that in 1928.

The increase in the value of metallic products is due chiefly to the increase in quantity and unit value of copper and iron produced. Lead and zinc also increased, but gold and silver decreased. The value of each of the mineral fuels produced showed increases, especially petroleum and natural gas. The output of petroleum was greater, and there was a slight increase in the unit value. The total quantity of coal produced increased appreciably, but the total value increased relatively less, because unit values were lower.

The following figures give the estimated total value of metallic mineral products and nonmetallic mineral products other than fuels and of mineral fuels produced in the United States in 1929:—

Metallic	$1,540,000,000
Nonmetallic (other than fuels)	1,200,000,000
Mineral fuels	3,160,000,000
Total	$5,900,000,000

These estimates are subject to revision and replacement by precise figures for 1929 as soon as the Bureau of Mines can complete the canvass of mineral industries.

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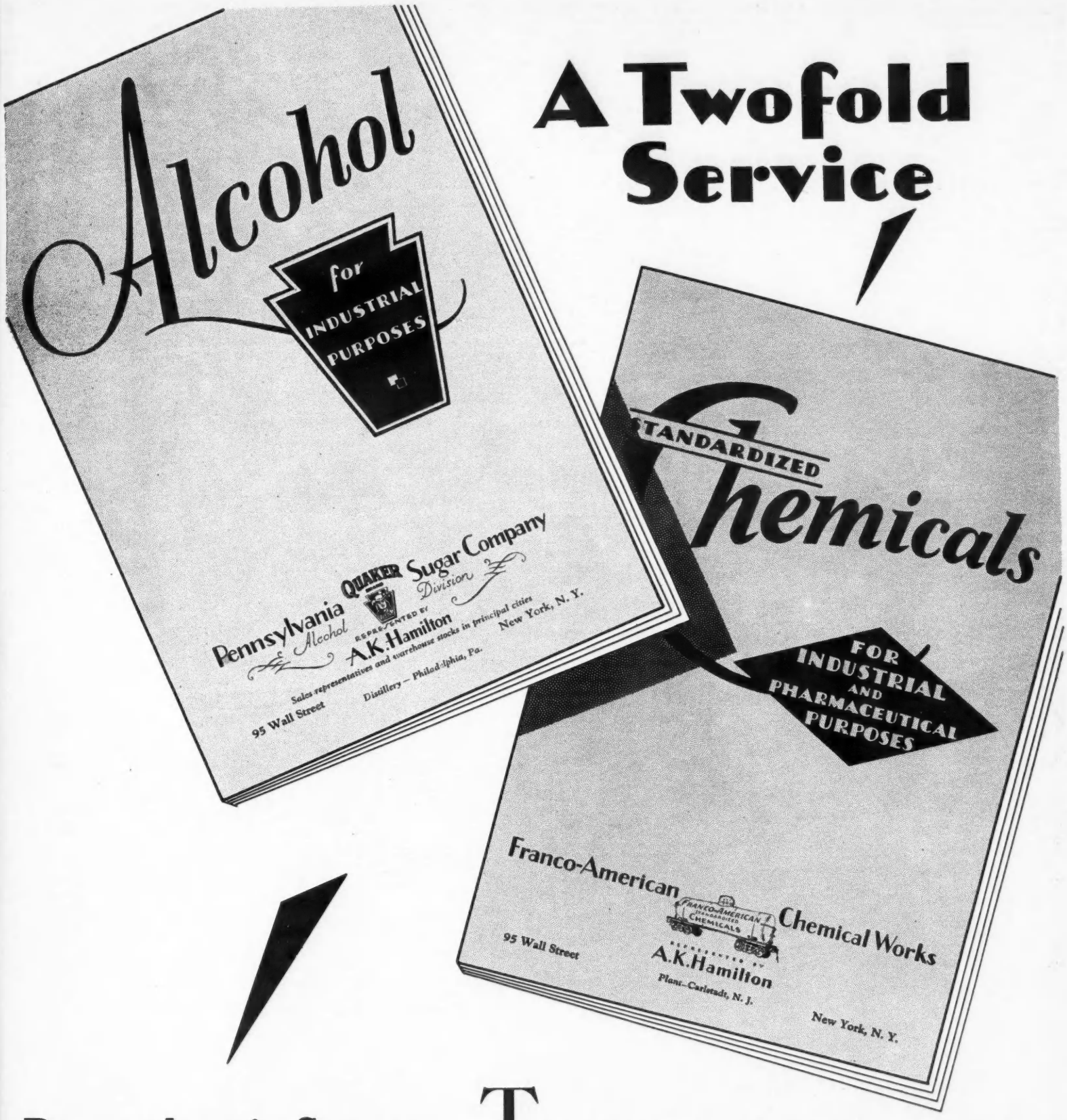

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